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VACCINATION FROM AN OSTEOPATHIC STANDPOINT

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Osteopathy as a school of practice takes no stand for or against vaccination or serum therapy. That osteopathy is a system of therapy which is founded upon fundamentally scientific principles no one who has kept up with its growth, research and practice can doubt; and as such, anything which is unscientific is necessarily unosteopathic. However, the experienced osteopath has, I believe, another reason for not employing these methods, and that reason is that the results of osteopathic treatment in acute infectious disease are more satisfactory than those obtained by other methods.

The general purpose of vaccination is to cause the antibody-forming organs of the body to be excited to greater activity. I believe we can do this osteopathically and, I am sure, without the dangers of contamination. Another reason for being guarded in using vaccines is that these methods are, for the most part, yet in the experimental stage. No better evidence need be given of this fact than that each year the results of recent research show certain of the old methods to be fallacious and a dangerous practice. As an example of this, I cite the reader to the fact that the attenuated vaccines,[a] so popular two years ago, are now condemned as a dangerous practice; only the dead bodies of bacteria are safe for use in bacterial vaccination.[b] Bacteriological experimental work has been done on more than a hundred infectious diseases. No phase of medical science has received more attention in recent years, and yet I doubt if a majority of our better informed physicians would claim that we can sucessfully treat more than a half dozen of these by vaccination or serum therapy. Therefore my reason for classifying these methods at present as in the experimental stage. This, however, is wholly different from saying that bacteriological research will never develop a reliable therapy, for, as Darwin says, "* * * it is those who know little, and not those who know much, who so positively assert that this or that problem will never be solved by science."[1]

To summarize, then, I hold that since osteopathy offers a better and safer prognosis, it is unwise to resort to methods, the clinical value and scientific foundation of which have not yet been positively determined.

It is not my purpose to consider the bacterial vaccines or serums. I will discuss here only the practice of vaccination for smallpox, against which I take a positive stand for the following reasons:

[a] The method was originated by Pasteur in 1880, and in general condemned only by recent research.

[b] "Living attenuated virus is dangerous because of not understanding the property whereby bacteria become attenuated and suddenly regain their virulence." Dr. Harris, Professor of Bacteriology, University of Chicago. Also see, "Infection, Inmmunity and Serum Therapy," by Ricketts and Dick, 1911 edition, page 363; see also foot note d.

I claim that it is an unscientific practice and that this phase of the subject has received too little attention. Most pro-vaccinationists (I was an ardent pro-vaccinationist three years ago) base their opinions upon statistics only, or this with experience which is often very limited, and fail to consider other sides of the question.

The origin of vaccination for variola, unlike other methods of vaccination and serum therapy, was not the result of scientific development, but on the other hand is shrouded in mystery and superstition, and modern research workers have not as yet been able to reveal the mystery.

Edward Jenner is looked upon as the inventor of the method, but this is not true, as he only acted in the capacity of promulgator of that which was already practiced. During the middle of the eighteenth century there was a superstition which prevailed in the country districts about Gloucestershire, England, that if one uffered from infection of cowpox he would not take smallpox. In 1771 a schoolmaster by the name of Platte practiced vaccination with cowpox virus; and in 1774 an old farmer by the name of Benjamin Jesty practiced it.—(Gibson's Practice, Vol. I.)

These parties did a flourishing business, especially among the maids, who dreaded the horrid pock-marks. Thus it will be seen that Dr. Jenner merely became an emulator, and even secured much of the subject matter for that first famous paper from "Dr." Jesty's patients. The "proof" adduced by him had to do with the ordinary variety of cowpox as used by his predecessors, viz.: that one who had suffered from cowpox infection would be immune for life from smallpox. When this was clearly disproven at the time by veterinary doctors, that such was not the case, and that following cowpox the human subject was readily susceptible to smallpox when exposed to it, he readily shifted the basis of his conclusion to another disease, eczema pustulosum of the horse—a purulent affection of the horse's heel, commonly known as "horse grease. This he declared to be the genuine source of protective virus, and any other was spurious.

This he claimed to be the true smallpox of the horse, and if transmitted to the cow would constitute the true vaccina, and was the origin of smallpox in man. Therefore his second paper on the subject dealt with what he termed "horse-grease cowpox," and his lone experiment with this virus resulted in the child dying in agony of a "contagious fever" before the boy was inoculated with variola. The direct inoculation by horse-grease being rather too acute in its "protection," Jenner then inoculated six children with virus from a cow suffering with a disease supposed to have been transmitted to it from the horse. (British Encyclopedia, Ninth Edition, and some American reprints.) These children were not variolated, Jenner declaring that it was not necessary because of the proof already produced being sufficient, and which had to do only with the first or "bogus" kind. It was after the publication of this second paper that Dr. Pearson, of London, *et al.*, friendly to Jenner, pointed out to him that the term "horse-grease" in connection with his proposition would condemn it. In the words of Pearson, he "must take the horse out of it or it would damn the whole thing." Acting on this suggestion, Jenner wrote a third paper in which he substituted the term "spontaneous cowpox." The use of horse-grease for vaccination purposes did not die with the term, as Dr. Sacco, of Milan, Italy, acting on Jenner's presumption, in 1813 started the use of equine matter (horse-grease) and this became the principal virus used in that country at that period. This was also furnished to Dr. DeCarro, of Vienna, where is was extensively used. Jenner also experimented with some diseases of the swine, afterwards inoculating some members of his own family, resulting in the death of one of his children. This, like the horse-grease, was too acute in its action, and was abondoned. His declaration that these various diseases of the lower animals were the smallpox of man led to many unsuccessful attempts to derive vaccinia by the direct inoculation of variola in the cow. The animal being highly non-susceptible to human smallpox, few, if any, of these attempts were successful. Dr. Thiele, of St. Petersburg, Russia, is said to have, after repeated trials, produced cowpox in a cow by inoculation with variola, which manifested itself in the single vesicle on the mucous membrane of the vulva. The virus from this is said to have produced in the human subject characteristic vaccinal reaction. Whether this was or was not the result of variola is merely conjecture.

Babcock and Ceeley, of England, are also said to have brought about a strain of vaccinia from this source. If vaccinia appeared in the cow after such inoculation, the question arises, might it not have been due to the prevalence of the ordinary cowpox? Again, it must be borne in mind that medical methods of recognizing disease during this time were crude. This is all the more probable because smallpox and cowpox are not the same disease, therefore one disease could not produce an

other. This was conclusively proven, at least to itself, by the Royal Academy of Medicine, Lyons, France, as well as by means independent investigators, which evidence gained little credence outside of France.

Dr. Woodville, of one of the inoculation hospitals of London, started "humanized" vaccinia in 1799 from a cow. Just what brand of cowpox this cow furnished has not been made clear; at any rate, Dr. Woodville made popular the method of arm-to-arm vaccination and supplied the virus to several hundred physicians at home and abroad, Jenner himself being supplied from this source. This was the world's principal supply of virus from 1799 to 1836, when it was discovered that "protective" virtue had long since run out.[2]

Many of the inaccuracies of the early experimenters are pointed out in an excellent little book by Alfred Russel Wallace, from which I quote.[3] Relative to the superstition that an attack of cowpox conferred immunity against smallpox, he writes:

> Jenner, in 1798, published his *Inquiry*, giving an account of the facts which, in his opinion, proved this to be the case. But in the light of our present knowledge, we see that they are wholly inconclusive. Six of his patients had had cowpox when young, and were inoculated with smallpox in the usual way from twenty-one to fifty-three years afterwards, and because they did not take the disease, he concluded that the cowpox had preserved them. But we know that a considerable proportion of persons in middle age are insusceptible to smallpox infection; besides which, those who most strongly uphold vaccination now admit that its effects die out entirely in a few years—some say four or five, some ten—so that these people who had had cowpox long before were certainly *not* protected by it from taking smallpox.

I firmly believe that if anyone who has a liberal knowledge of bacteriology will go to the trouble of making a careful study of the history of the development of smallpox vaccination he will be forced to the conclusion that it is highly fallacious.

Many research workers have at different times described micro-organisms which they thought to be the causative factors of smallpox,[4] but nothing as yet is definitely known relative to the bacteriological nature of the disease and no satisfactory information can be gained from the modern texts. Quoting from Rickets and Dick,[5] "* * * the nature of the virus used is unknown, as in smallpox and hydrophobia; in all probability, however, it consists of micro-organisms, rather than toxins alone."

All modern methods of vaccination and serum therapy depend upon the production of a vaccine, serum or other immunizing agent, directly or indirectly from pure cultures of the micro-organisms causative of the disease. It is, therefore, unscientific to continue such practice until we know something of the micro-organism causative of the disease variola.

The use of living cultures, even though they are of attenuated virulence, is at present considered a very unsafe practice;[c] and in the case of smallpox vaccine, granting that the virus may be the same after having passed through the calf, there is no way of determining the degree of attenuation. Considering, then, the theory or all of the conflicting theories of smallpox vaccination to be true as stated, viz., that vaccine virus contains the organisms of toxins of variola or cowpox or of some other disease in an attenuated form, it is still unscientific and dangerous in a threefold sense, namely: First, it is (according to theory) a living virus;[d] second, the attenuation of it is

[c] See foot notes b, d.

[d] The dangers of the use of living virus are many; there is always a possibility of producing the disease of the virus in an unmodified form or starting an epidemic, as was frequently done when arm-to-arm vaccination was practiced. See reference 8. There is danger of exciting to activity some latent disease different from the virus used. There is also danger of producing a condition of anaphylaxis (increased susceptibility) to the same or some other disease. (Foot note b.)

unknown and cannot be determined;[e] and third, it is almost constantly contaminated with extraneous bacteria, many of which are pathogenic to man and have been known to produce disease and death.[f]

In our researches, tests of various kinds of virus procured from the common market and sold ready for use, we have invariably found living pathogenic bacteria as follows:

Microscopic examination of the vaccine virus seemed to reveal a larger number of various kinds of micro-organisms than we were able to grow on culture. On the other hand, we grew organisms that we could not demonstrate in the original virus. This could easily occur, because of the difficulty in identifying the different organisms merely by their staining and morphological characteristics. The number of bacteria visible at one time in the field of the scope varied from 0 to 50 or more. Sometimes not more than two or three organisms could be found in a whole specimen, while another smear from the same capsule would show large numbers, which could hardly be attributed to the grouping of the colonies in the lymph, as these clumps were invariably of mixed varieties.[11] By cultural methods the examination of thirty different samples of virus from two of the best manufacturers, thirty-three different varieties of bacteria were segregated. Eighteen of these were found to be pathogenic to laboratory animals and most of these were also pyogenic. The pathogenicity was determined by inoculation tests on animals. Eight dogs, ten rabbits and thirty guinea pigs were used. In some of the animals severe septicemia was produced which resulted in death in from two to five days.[12 36]

Dr. J. F. Biehn,[g] formely bacteriologist for the city of Chicago, after having made extensive examination of the vaccines sent for the city's use, states as follows: "Owing to unexpected demands for virus, produced by widespread outbreaks of smallpox, new producers have entered the field, so that between inexperience and commercial necessities the practice of vaccination has been grossly injured by the use of lymph, at times of excessive virulence and often by that having no protective value, due to suppurative processes produced by the contained pyogenic bacteria, or to inert vaccine, a suppurative process being often considered a typical 'take,' giving a false security of protection. The extraneous organisms by means of the multiplication and products, not only interfere with the constitutional conservation and proper action of the lymph, but set up irritative and inflammatory processes in the patient. This will be very evident to anyone who makes a careful bacteriologic examination of the vaccine on the market today. * * * a number of observers have published their results of the bacteriologic examination of vaccine and have found conditions that are appalling to the conservative mind. During the epidemic of 1895 Fütterer examined the vaccine on the Chicago market at that time and found that much of it contained pus-producing bacteria of excessive virulence. As a result of this, the *Department of Health* stopped vaccination for two months."[13]

It might be argued that since "An Act to regulate the Sale of Viruses, Serums, Toxines, etc.," was passed on July 1st, 1902, and since now the government regulates through the marine hospital service the manufacture of these products, they would be free from dangerous contaminating bacteria, but this is not the case. The tests given above were all made later than 1902. From Park-Williams' Bacteriology, 1910 edition, I quote the following: "It is impossible to prepare vaccine on a large scale so that it is, at the time of its removal, free from bacteria. In fact, there are usually large numbers of one or more varieties of bacteria present. * * * The largest number found by us in vaccine pulp from the calf was 126,360 in one loop full, and the smallest number 523. * * * After two or three weeks, the number of living bacteria is usually greatly diminished, especially after addition of glycerine-carbolic mixture, when they entirely disappear.[9]

The above statements are prabably true except the last. In proof of my conten-

[e] It has been suggested that the apparent success of the Pasteur treatment for rabies argues strongly for the value of an attenuated living virus, but this treatment consists of the injection into patient of doses of gradually increased virulence according to modern bacteriological methods and in this way increasing the resistance of the individual for this specific infection. (Reference 9.) The causative factor (Negri bodies) of rabies is quite definitely known, whereas nothing is known (6, 7) about the micro-organisms causative of variola.

[f] The report of the Surgeon General (10) gives fifteen or twenty cases of tetanus, erysipelas, etc., resulting from vaccination, many of which were fatal.

[g] See also Dr. Fütterer's report, who found fifty-five of seventy-five samples to contain "Pus organisms and ten with streptococci of erysipelas and phlegmonous inflammation."(13)

tion that the addition of carbolated glycerine does not cause the disappearance of bacteria from vaccine virus, I offer the following evidence: First, living cultures could not be grown from vaccine lymph if the glycerine acted as it is claimed. We have repeatedly shown that most vaccine virus does contain living pathogenic bacteria, and that these bacteria have not lost their virulence. We have shown further[14] by our own researches that carbolated glycerine of twice the strength ordinarily used for sterilizing vaccine lymph does not kill the organisms commonly found, nor does it destroy their virulence, for, after exposure to two-per-cent phenol solution for many days, these micro-organisms will grow on artificial culture media and will produce pathological lesions when inoculated into animals.

It is extremely unscientific and unreasonable, it seems to me, to assume that it would be possible to sterilize a mass of material containing a great number of various kinds of micro-organisms in such a way that all but one kind would be killed, and this one (the supposed causative factor of variola) left in such an active state as to be able to immunize against the disease. I can find no parallel of this in any of the bacteriological literature. The manufacturers of vaccine realize and even admit this fact.

Dr. Biehn, after having found the vaccines very impure and entirely unfit for use, wrote a prominent vaccine manufacturing company in 1904 relative to the fact that they must furnish a safer virus for the city's use. The answer in part was: "We think you will agree with us that the practitioner is in need of a vaccine virus which is active. This is the first consideration; the second is its purity. We now aim to send our virus out in as short a time as is consistent with careful bacteriological reports received from our laboratory as to its purity and activity. So long as the bacillus found in the virus is not pathogenic, we do not regard it as sufficient cause for holding back the virus, as we formerly did. For the reasons previously stated, causing the vaccine to fail in a number of cases. * * * you can appreciate that it is scarcely practical to have vaccine virus free from organisms. We have gone into this work so very carefully, having spent several years with the view of eliminating the bacteria from vaccine, and we now find that it is not always practical and frequently destroys the activity of the virus, which is the most important consideration in supplying vaccine to the public to prevent the spread of smallpox. Physicians are not satisfied with the purity of the virus alone; they demand activity first and all the time."[h]

For the above, and many other reasons, which I cannot here use space to give, I have arrived at no hasty conclusion, as it seems to me, in stating quite positively that a pure, safe, vaccine virus for smallpox at the present, with our limited knowledge of the micro-organic nature of the disease, cannot be produced.[i]

In summarizing the unscientificness of vaccination for smallpox, I offer the following statements, which show clearly that the method varies widely in theory and practice from modern methods of vaccination and serum therapy: First, vaccination for variola consists of the introduction into the system of a single dose of material, the nature of yhich is unknown;[j] second, if a living virus, it is unsafe because of that fact; and third, because its virulence is unknown and undeterminable;[h] fourth, because the virus is practically always contaminated with foreign bacteria, the nature of which is un-

[h] A part of the letter referred to may be found in Dr. Biehn's report. See 13.

[i] *Journal of Osteopathy*, April, 1911, page 286, (reference 15): "Tetanus spores live for months in glycerine, and glycerine has practically no neutralizing action on tetanus toxin." Ricketts and Dick, page 740, (reference 5.): "I have found that the specific organism is only destroyed after exposure to chloroform vapor for twenty-four hours or more. The spore-bearing bacteria are not killed even after forty-eight hours, but as they are always a contamination, their presence can be prevented by proper care in handling." (Biehn 13.) We see, therefore, that spore-bearing bacteria cannot be killed without destroying the active principle of the virus. B. tetani is transmitted by spores.

known;[i] fifth, when inoculated (vaccinated) into the system, it is supposed to produce some kind of constitutional reaction, the nature and effects of which are unknown;[k] sixth, this inoculation is supposed to produce a local pathological lesion or lesions which represent a successful "take," but these signs are so nearly like the lesions of streptococcus or staphylococcus infection that they certainly cannot always be distinguished.

The characteristic appearance of the vaccine lesion has been described by pathologists, but experienced physicians have many times stated that these signs are not reliable. If the vaccinated person is immune to variola, it is claimed that the inoculation "took." If he is not immune, it is then claimed that the inoculation did not "take." This argument is held regardless of the nature of the lesion following the inoculation.

Martin, by inoculating calves with *bacteria* segregated from vaccine vesicles, which he thought to be the active, exciting factors of smallpox, writes: *"The material 'takes' with the same certainty as the lymph from the vesicles. From the vesciles produced by it upon the calf, I have vaccinated a number of children, in every case inducing vaccinia of the most perfect type.* That these cultures were nothing other than pyogenic bacteria we know from present-day bacteriological information, and from his statement." *"These cultures, however, were not pure, but contained quite a variety of bacteria. In every instance the blood serum was liquified."*

Many others have described similar similar organisms.

Buttersack reports many varied kinds of bacteria *"sometimes arranged in chains,"* which he thought to be the active virus. I believe he was right. As I shall try to show later, the lesions produced by vaccination are quite probably due to strepococcus or some other pyogenic infection. Still other workers, namely Nikolski, Grigorijew, Besser, Ruete, and Enoch, have isolated bacteria from the vesicles which produce pathological lesions the same as vaccinia in every respect. These men were bacteriologists while Jenner was not, and therefore why should we disregard their results and accept his? Some of our present-day bacteriologists and pathologists try to differentiate vaccinal eruptions from pyogenic eruptions, but they have not actually experimented to determine this difference. On the other hand, as their foot-notes show, they have merely copied and recopied these results. Those who have tried have utterly failed to establish the relation between smallpox and vaccinia. Since bacteriological methods have been improved it does not seem possible to inoculate cattle with variola. Park and Williams say: "The successful inoculation of the first series of cattle from smallpox is a matter of great difficulty, but so many experimenters have *asserted* that this has been done, that there seems to be no doubt as to its truth. In our laboratory not one of many attempts to accomplish it has been successful."

There is much reason for believing that the so-called "take" reaction following vaccination is nothing other than a pyogenic infection. I believe this is the explanation because of the following reasons: First, pyogenic bacteria are found almost constantly present in vaccine lymph, therefore pyogenic infection is in most cases possible; second, as stated before, the so-called vaccinia lesions cannot always, if ever, be distinguished from pyogenic infections, as shown above by the experiments of Martin and Buttersack; third, following vaccination, eruptions are frequently found on other parts of the body as in pyogenic infections;

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[i] "In some instances the nature of the virus used is unknown, as in smallpox and hydrophobia; in all probability, however, it consists of micro-organisms rather than toxins alone." Ricketts and Dick, 5; Muir and Ritchie, 34.

[k] The texts on bacteriology, pathology, and practice, give very little or no information on this subject.

If there is any value to inheritance as a factor in affecting immunity, it comes, I believe, as an answer to a demand of function; that is, there being a demand for a certain kind or amount of antibody for protection against certain diseases, this demand will be met in time by the survival of the fittest, and the transmission of certain physiological characteristics. I can see in this way how certain diseases, severe in nature, might kill off the naturally susceptible and leave only those who possess a high degree of physiological resistance. Thus in time, by the transmission of such characteristics, a more or less naturally immune people might exist, but vaccination could play no part in such a process.

The blood changes in vaccinia more nearly resemble those of a pyogenic infection than they resemble variola. (24, 25.)

fourth, virus must be kept "fresh" or it will not produce "takes." Glycerinated virus loses its "activity" in about the same length of time which is necessary for the disappearance of the pyogenic bacteria. Quoting from Park Williams,[9] "From *time to time* a single lot of virus will fail by the end of one month," and quoting from Hiss and Zissner,[16] "In glycerinated pulp the bacteria will *often* disappear entirely in the course of a month," showing clearly that by the destruction of pyogenic bacteria the active principle of vaccine is lost. Fifth, any treatment of the virus which tends to destroy the pyogenic bacteria present, also tends to reduce its "taking" power. I here refer the reader to that part of the manufacturer's letter, which states: *"You can appreciate that it is scarcely practical to have vaccine virus free from organisms * * * and we now find that it is not always practical and frequently destroys the activity of the virus."* This sample which the manufacturers claimed to be *a safe, practical virus,* contained, according to their own laboratory analysis, 250,000 colonies of bacteria, among which staphylococci and streptococci were found.[13]

In this letter the manufacturers practically admit that they cannot make an active vaccine free from dangerous contaminating bacteria. I believe there is no better or more reliable firm than this one. They have for many years made a specialty of vaccines and serums; they are less extravagant in their claims than others and are very favorably known to the medical profession. I therefore state again that I believe there is no active principle in vaccine lymph other than the contaminating pyogenic bacteria.

There are those who attribute the present low death rate from variola to inherited immunity transmitted to the present generation by well vaccinated parents.[11] This view, I believe, is wrong in a double sense: First, present conditions do not bear out the statement. The mortality, for example, in the United States, with a poorly vaccinated progeny, is much lower than in certain foreign countries, such as Germany, where practically all persons for many years have been vaccinated, re-vaccinated, and re-vaccinated; secondly, and of much greater scientific importance, is the fact that acquired immunity, whether from an actual attack of the disease or from vaccination,[m] is not inherited.[17]

It seems timely here to devote a paragraph to the one chief argument of the pro-vaccinationists—statistics[n] in favor of vaccination. It is true that if we accept blindly the statistics as given, most certainly we would be convinced. But I believe, after having studied this phase of the subject, that anyone who will do likewise will be forced at least to these conclusions: First, that they are not always correct;[o] second, that the statisticians have in many instances taken and

[m] All children are naturally susceptible to the common diseases of childhood. Surely every parent has had one or more of these diseases and an attack of the disease confers a greater immunity (18) than could possibly be conferred by vaccination, unless the vaccination resulted in a severe attack of the disease, which often occured when the arm-to-arm method was employed. (19.)

[n] It is not my purpose to give any detailed discussion of the statistical side of vaccination. My sources of statistical information have been as follows: Governmental reports, reports of the Surgeon General of the United States Army, reports of various hospitals, etc. The information which may be had from the Anti-Vaccination League, can be verified by governmental reports in most cases and is therefore reliable, but even governmental reports are not always accurate, as the surgeons do not always report fatalities from vaccination. (See Surgeon General's Report, 1900, page 205.)

[o] "The facts and figures of the medical profession and of government officials in regard to the question of vaccination must never be accepted without verification.—*Alfred Russel Wallace.*

recorded only those parts[p] which favor their views of the question;[q] third, that anti-vaccinationists have just as good statistical argument as the pro-vaccinationists.[r]

That certain pro-vaccinationists have written very misleading articles for magazines and medical journals;[q] and that these same fallacies have crept into textbooks, is also very evident to anyone who has carefully investigated. During the past two years there have been at least six deaths in St. Louis[s] which are traceable to vaccination as a cause, while on the other hand, I cannot find a report of a single death from smallpox in the entire state during this period. This bit of statistics has been carefully avoided by those medical men (and they knew the conditions)[q] who have recently written a magazine article on the subject.

A table, "Showing Reduction of Mortality from Certain Disease *Directly Affected by Sanitary Measures* in the City of Chicago," shows the "percent reduction," last decade: Diarrheal diseases, 57.0; consumption, 22.7; diphtheria and croup, 71.0 (this group consists of several diseases which they were not then able to differentiate); scarlet fever, 84.6; typhoid fever, 56.3; smallpox, 97.1; measles, 68.0; whooping cough, 50.0; malaria, 93.3.[21] Many other diseases, such as bronchitis, dysentary, erysipelas, puerperal fever, etc., have been similarly reduced. The reader will note that they do not claim here that this reduction in mortality in smallpox is due to vaccination, but that it is included in the list of diseases *"directed affected by sanitary measures."* From 1906 up to the present the reduction in mortality has continued in about the same proportion with those diseases in which vaccine and antitoxin *have not been used,* diarrheal diseases, for example, leading the list.[22] the "Saving of lives in ten years," is given as follows: Smallpox, 1,675; diphtheria and croup, 12,533; diarrheal diseases, 40,108. Reports of boards of health of many other cities show similar results. Sanitation, isolation and education in Chicago and many other cities are surely solving the problem of preventive treatment of the infectious and contagious diseases.[t]

[p] See summary of statistics in "Vaccinia and Vaccination," *Journal of Osteopathy,* April, 1911; Dr. J. W. Hodge's report, "How Smallpox was Banished from Leicester;" "Vaccination a Delusion," by Alfred Russel Wallace; "Facts against Vaccination," a reply to "Facts About Vaccination," by the British Medical Association. These last three named may be had from the National Anti-Vaccination League, 27 Southampton Street, London, W. C.

[q] There appeared in the *Interstate Medical Journal* of February, 1912, an article by Dr. Dock, of Washington University, medical department, and Dr. Harris, City Bacteriologist and Pathologist, relative to smallpox and vaccination in St. Louis. These men have been witnesses for the school board there in a fight against the Anti-compulsory Vaccination League, for which I was a witness, therefore I know that many of the statements in this article were very misleading and in several other instances I have found similar inaccuracies in print.

[r] Anyone who has made a study of the value of statistics, knows that they may often be used to prove or disprove either side of a question, and now with this mass of statistical evidence for and against vaccination, I find nothing on the pro- side which cannot easily be refuted by their opponents.

[s] I have had occasion to investigate the causes of some of these deaths from first-hand evidence and feel sure that the statement is correct.

[t] "That smallpox is less prevalent and less severe at the present time than a hundred years ago no one denies, but the pointing to present conditions with the assertion that vaccination has controlled the disease and ridded it of its terror, is ambiguity in the extreme." * * * "Had some ambitious, fame-seeking genius invented a similar proposition in connection with leprosy at the time vaccination was discovered, his name would be adorning the walls of the hall of fame. * * * Asiatic chlorea, bubonic plague, yellow fever, etc., have shown a like decrease and are even better controlled than small-pox." (20.)

SOME OF THE DANGERS OF VACCINATION

The dangers from vaccination are chiefly from these sources:

First, contaminated vaccine lymph. All bacteriologists know this and they also know that vaccine lymph cannot be made free from bacterial contamination, yet they usually try to shift the fault to other causes; second, careless technique, by which means micro-organisms from the patient's skin, from dirty instruments or the doctor's hands may get into the wound, or it may become infected after the operation by careless treatment. Since the virus is practically always contaminated by foreign bacteria, the chances for infection vary directly with the pathogenicity and virulence of its micro-organic content. Since the skin always harbors pyogenic bacteria[v] and because the application of germicides or antiseptics are not allowable before or after vaccination, the vaccinator must inoculate into a bacteriologically dirty abrasion, which practically insures a pyogenic infection. Futhermore, between lack of knowledge and carelessness upon the part of the vaccinator and the vaccinated in the proper asepsis and general care of the wound subsequent to the inoculation, the percentage of infection is high.[u]

Pro-vaccinationists claim that since the bovinized instead of the humanized lymph is used, the dangers from contaminated virus are reduced to a minimum. It is true that we do not find so many diseases common to the human species such as syphilis, leprosy, etc., but there are many new diseases which are common to cattle, such as tetanus,[10 26 27] foot and mouth disease,[27 28] etc., which have been added, and, as has been shown, vaccine lymph is yet far from safe.

From Dr. Biehn's report we note the following:

> I next examined some of the crude pulp just as it came from the calf from the last two named manufacturers, and found staphylococci, streptococci, bacillus coli communis, and proteus vulgaris * * *. I found also that the calves are often kept in the same room with horses used in the preparation of antitoxin. As a result of this, there is a possibility of a contamination with tetanus bacilli * * *.

McFarland has reported ninety-five cases of tetanus following vaccination, nearly all of which occured in one year.[32]

> The case of Valentine McGrath, who a few days after vaccination showed symptoms of tetanus, according to the physician who was first called, and who died with locked jaw, convulsions and opisthotonos, according to the statement of the parents, is surely an example. The school board doctors of St. Louis claimed first the child's death was due to tubercular meningitis, but a post mortem examination by Dr. Harris, the city pathologist, showed clearly that this diagnosis was wrong. A specimen of the child's arm was sent to me and a thorough bacteriological examination revealed B. tetani. Cultures of this organism, when inoculated into rabbits and guinea pigs, resulted in death with symptoms of tetanus.

The following diseases have resulted from vaccination:[29] Uticaria, erythema multiforme, vesicular and bullous eruptions, roseola, like measles; erythema, like scarlet fever; purpura, generalized vaccina, eczema, psoriasis, contagious impetigo, syphilis, leprosy, tuberculosis, erysipelas,[w] cellulitis, furunculosis, gangrene, pyemia, tetanus,[10] foot and mouth disease.[28] The following diseases, taken from the report of the Surgeon General:[10] Neuritis, false ankylosis, lost sensation, paralysis, synovitis, axillary abscess, septicemia, and tetanus.

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[u] Drs. Dock and Harris state that from one and seven-tenths per cent. to ten per cent. of all vaccinations in school children in St. Louis result in infection. (23.)

[v] "Virulent bacteria, especially staphylococci and streptococci, are found normally on the skin or between the superficial horny cells, but are not able ordinarily to penetrate deep into the tissue unless favored by some cutaneous injury." (33.)

[w] Edwards states that the infection in erysipelas is sometimes carried by "unclean instruments and vaccine." (31.)

That death from vaccination is not as infrequent an occurrence as pro-vaccinationists would have us believe, anyone who investigates may surely know.[x] For reasons which we can all understand, few medical doctors report such cases.

Another danger of vaccination is that it may render the individual less resistant to other infectious diseases, even variola itself. This is due in part to the anaphylaxis, or increased susceptibility caused by the inoculation, and in part to the invasion of the body by pyogenic bacteria or their toxins, or both, and is characterized by febrile symptoms. This is one reason why school board physicians advise that vaccination be done early in the year before the infectious diseases become common.[10 22]

The old method of arm-to-arm vaccination, which is little used at present, was a common cause of epidemics of smallpox. There seems to be little danger of this at present. I have never heard of an individual vaccinated with glycerinated calf lymph contracting variola or transmitting the disease to a second party.

This is not because the so-called modified variola (vaccinia), which the vaccination is supposed to produce, is not contagious, for on the other hand, mild cases of variola following arm-to-arm vaccination is highly contagious. Bolton states: "The mild attacks that follow vaccination were, however, just as contagious to other persons as the natural disease, so that the dangers of this practice to the community were very great."[20]

I believe the explanation is that calf lymph contains none of the causative factor of variola in the attenuated form, or symptoms of the disease would sometimes result from this method of vaccination, as is so common in the arm-to-arm method.[z]

ANSWERS TO CRITICS

That I may meet certain arguments which may be advanced in criticism of the above statements, I state a few of them here: First, it may be argued that some of the bacteriologists who have analyzied and found contaminating bacteria present in vaccine virus are yet faithful believers in this practice and claim to believe that a safe, effective, germ-free virus can be produced. Dr. Biehn is one of this type, but he was, and I think yet is, a manufacturer of seed virus for the production of vaccine virus, therefore there is a reason for his belief other than his scientific faith, which answers the first question. Relative to the second question, I refer the reader to the fact that Dr. Biehn experimented for several months on various methods of producing a germ-free virus and then went back to the glycerinated lymph as used before.

Few there are, indeed, who can follow the trend of scientific facts without being at some point led astray by such things as "other interests," orthodox ideas, lack of faith in true scientific reasearch, or the fear of being criticized for entertaining ideas different from the average. The "other interests" factor, I believe, has had much to do with the position the writers of the texts take on the subject. The medical doctor who collects his fee from his patients or his salary from the school board, of course has his interests at stake.

All bacteriologists fully realize that vaccine virus is unsafe and that it cannot be prepared free from bacterial contamination, but most of them hold that of the two evils, namely, complications from vaccination and smallpox, they prefer taking chances with the former. I believe, in fact I know, that few of these men have ever sufficiently studied the

[x] "The report of the Registerer General for England and Wales," shows that from 1881-1901 (Vols. XLIV-LXII) and 1902 nearly one thousand deaths (1,000) are recorded as directly due to vaccination." (30.)

[z] Pyogenic infections on the other hand are always highly infections, but seldom contagious.

question that they may fully realize how unscientific it really is, but have arrived at their conclusions only from the statistics commonly circulated.

It is interesting to note the various methods, theories and excuses used by pro-vaccinationists in explaining why certain vaccinated persons contract variola. Some hold that the immunity has run out and no one is so bold as to assert positively, within ten years of the length of time one is immune. McFarland (7th edition, page 111) states that some individuals are susceptible to variola, but not susceptible to vaccina, therefore they are not immunized by vaccination. On the other hand, the converse of this statement is also true, that some individuals are susceptible to vaccinia and not susceptible to smallpox.[y]

WHY MEDICAL MEN BELIEVE IN VACCINATION

There are, I believe, many factors involved in the answer: First, doctors of any school are too prone to accept the teachings of their school without actual and exhaustive study on their own part; it is the way of least resistance; second, the mercenary factor; third, they have not had the necessary bacteriological training to understand its lack of scientific consistency; fourth, that the sense of pride one has in his own good judgment forbids that he, after having been convinced or having found by chance that his ideas were erroneous, should pubicly acknowledge such error; fifth, because the chief source of information on vaccination and serum therapy of the average physician consists of the pamphlets of the manufacturer, which of course gives only one side of the question; sixth, the fear of criticism from other medical men or general unpopularity. I know two good bacteriologists now teaching in medical schools who think just as I do about vaccination, but do not dare to express their views. Of all these reasons, I believe the most dominant are lack of information, from not having studied both sides of the question, and fear of criticism and unpopularity.

[y] I myself once unknowingly slept with an individual, sick with smallpox, and later had charge of a pest-house where I dressed the eruptions of several patients daily. Some weeks after this I was vaccinated with (according to the doctor's statement) a successful "take." I was therefore seemingly immune to smallpox but susceptible to vaccinia.

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DERMATOSES

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In presenting this paper for your consideration, I apologize for trying to cover so vast a subject in so short a paper, but inasmuch as this subject was assigned me by your program committee, not chosen by myself, the responsibility rests with them. I shall have to deal largely in generalities and in discussing treatment will try to show some of our possibilities, *not always* based on clinical experience. I am indebted very largely to Pusey's very excellent work on this subject for much of the material for this paper.

Briefly, the skin, considering it as an excretory organ, is composed of the epidermis, which with its appendages forms the parenchyma of the organ; the corium being the supporting framework; and the subcutaneous tissue which consists in a network of connective tissue whose meshes are filled with fat. This subcutaneous tissue contains the vessels which supply nourishment, and carry the materials which are to be excreted, and also the nerves supplying sensation to the overlying epidermis. Also the subcutaneous tissue furnishes a bed for the deeper hair follicles and glands, and in certain localities for the pacinian bodies.

The functions of the skin are:

First—To act as a protective covering for the body;

Second—An organ of excretion;

Third—Very important functions in the regulation of body temperature;

Fourth—Seat of the sense of touch;

Fifth—To a slight extent an absorptive membrane.

The etiology of dermatoses may be subdivided as follows:

First—Causes which act directly on the skin, such as trauma inoculation, etc.;

Second—Causes affecting the supply or composition of the blood and lymph, its nutrient fluids;

Third—And lastly, by causes which affect nourishment of the skin, which is directly regulated by the trophic nervous mechanism.

From another standpoint, the causes of skin diseases may be classified as predisposing and exciting.

Predisposing Causes—The predisposing cause is of particular interest to us as osteopaths because of the etiological influence of the osteopathic lesion, lowering the normal resistance of the tissues and rendering them more easily subject to pathogenic agents. This may be the osteopathic lesion, determining the location of the skin affection, according to what particular group of trophic nerves are involved. Then, too, we have as a predisposing cause of dermatoses, any constitutional disease or condition, which by lowering body vitality, renders the individual less able to resist pathological processes. Under predisposing causes which must also be considered individual susceptibility, idiosyncrasy and diathesis. The individual having a thick greasy skin, being more able to resist external irritants, than one with a fine, dry skin. Certain individuals are more resistant to the action of cutaneous parasites, and toxic agents than others. Under diathesis, which Hutchinson has defined as "any condition of prolonged peculiarity of health, giving proclivity to definite forms of disease," we may consider intimate marriage among ancestors, neuropathic family history, or a family history of tuberculosis, or carcinoma.

Certain diseases from their nature usually occur in early life, such as the eruptive fevers, congenital defects such as naevi, and congenital syphilis. The vegetable parasites are usually met with in childhood, such as ringworm, etc. At puberty, when the hair follicles and sebaceous glands take on increased activity, we find frequently acne and blackheads.

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The early adult life is where we look for the occurence of lupus and of psoriasis and of the occupation dermatoses. While later at the time of the menopause, because of the severe nervous disturbances which occur, we look for pigamentary disturbances. In old age, when the nutrition to the skin becomes less, it is more subject to injury and degenerative processes.

Exciting Causes. — Under exciting causes, we may consider both internal and external causes. We see some cases in which the internal and external causes supplement each other; for instance, a skin affection of internal origin is modified by external influences, like scratching or infection. Among the internal causes we have, first, toxic; second, nutritional; and, third, nervous causes.

Under toxic causes we must also consider nutritional causes, operating both through the toxic element being carried by means of the blood and lymph to the cells of the skin, and through their effect indirectly, by producing a disturbance of the nervous mechanism govening the nutrition to the skin, the latter being by far the most common. We have drug eruptions, for example, in the administration of quinine, morphine, chloral, iodine, bromides, antipyrine, salicylates and belladonna. Then we have eruptions and vasomotor disturbances in the use of antitoxins.

In most of the drug eruptions the skin lesions are the result of disturbed nervous control, both of the nutrition, and vasomotor control of the vessels supplying the skin affected. But in the case of iodine and bromine, the salts are excreted through the skin, and hence come into direct contact with the cells of the skin and produce irritation.

Foods.—Under foods we may consider the lack of sufficient quantity or quality of food as a cause; for example, in penal institutions or on board ship, we may have scurvy; or as the result of following out some dietetic vagary, we may have skin lesions; but the most common influence of food on dermatoses is because of over-indulgence, or because of indigestible or improper articles of food, in which case the undigested food acts as a toxic element in producing dermatoses. For instance, we have skin lesions caused in certain individuals from eating strawberries or other small berries; certain salad dressings, pickles, olives, sausages, griddle cakes, pastries and sweets, all acting through the effect upon digestion. Sometimes alcoholic liquors by their attendant disturbance of digestion and metabolism are a causative factor. You are all familiar with the dermatoses attendant upon septic infections like typhoid, secondary syphilis, and of the eruptive fevers, these being produced by bacterial toxins. It is through their influence on the nervous mechanism that these dermatoses occur.

It is universally recognized by dermatologists that the nervous causes of skin affections are most important, and it seems to me that on account of the osteopath's signal success in influencing and curing nervous diseases, he must of necessity be very successful in the handling of dermatoses, whose cause or maintainance is due largely to disturbed nervous control of the parts affected.

We have in addition to the dermatoses accompanying the bacterial toxins, many others, in which nervous causes are most influential, for instance, the trophic ulcers, gangrene, urticaria and erythemas, which accompany locomotor ataxia, and the erythematous and vescular lesions of spinal meningitis.

In lesions of the sympathetic we have hyperemias, anemias, pigmentary disturbances and increased sweating. In peripheral nervous lesions the familiar example is zoster. In multiple neuritis we have sensory disturbances of the skin, pain, numbness, etc. The nutritional disturbances of the hair and nails we believe to be due to nervous causes.

Then we have the various reflex disturbances of the skin, in which there are vasomotor reactions at points distant from the site of skin irritation. The influence of the emotions should properly come under nervous causes also; fright, grief, and pathological mental states, all have their influence on the cutaneous pathology. It only seems to point out the vast importance of the intact nervous control in all cases of skin lesions.

The influence exerted upon dermatoses by the sexual organs has been greatly overestimated, according to Pusey, who attaches far more importance to the changes in the sebaceous glands attending adolescence, than of the influence of the sexual organs themselves. There is seen, however, a very close connection between menstruation in the female and certain nervous disorders of the skin, as for example, herpes, and it is common to see an aggravation of acne or eczema with menstruation. He attaches importance, however, to the reflex irritation produced by sexual disorders rather than to regard them as direct causes.

External Causes.—Among the external causes of dermatoses may be considered:

First—Mechanical, such as scratching;

Second—Chemical, such as carbolic acid, croton oil, the caustics and mineral acids; or the frequent causes of occupation dermatoses, such as too frequent or prolonged use of soap and water. We have, too, dermatoses caused by decomposing bodily secretions, those caused in certain individuals by iodoform and poison ivy and other poisonous plants.

Third—Actinic causes, such as X-ray, sunburn, frostbite, freezing, etc.

Fourth—Bacterial or parasitic causes, producing diseases, such as actinomycosis, ringworm, and probably, but not proven, cancer.

Then we have the staphyloccus and streptococcus introduced by scratching or other means, and modifying skin lesions already existing.

These causes all operate in producing or influencing dermatoses and because of the subsequent treatment being necessarily based on the causative factor, I have gone somewhat in detail.

Pathology.—The pathology in dermatoses is the same practically as that found in any inflammatory condition, varying in intensity in different cases, and according to this varying degree receiving different names to designate the type. There is first, hyperemia, with exudation of serum, and consequent swelling of the protoplasm of the fixed cells; as the process becomes more intense, the proliferation of the connective tissue cells and of the blood vessels occurs, and on through the various stages of inflammation. If the process advances to cellulitis we have either a very slow, or an incomplete repair. Almost always inflammation begins around the hair follicles. The primary skin lesions consist of macules, papules, vesicles, pustules, blebs, tubercules, tumors and wheals. The resulting secondary lesions are scales, crusts, excoriation, fissures, ulcers, scars and stains. These lesions may be present in different varieties in any one case.

This will in brief give you an idea of the pathology found in the dermatoses.

Examination.—In our diagnosis of skin affections the use of a hand lens in the local examination of the individual lesions, one magnifying from two to three diameters preferably, is helpful. But most important is the microscopic examination of the tissue by obtaining small specimens and determining the character of same as well as examining for microorganisms present in the specimen. In making the examination of the patient, it is advisable, in order to have a complete picture of the eruption, to have exposure of the entire body at one time. The patient is very apt to forget or deny the presence of an eruption in another part which does not trouble with pruritis or other annoying symptoms.

First, get case history, general physical condition, time of appearance of eruption and duration; then make your physical examination to determine the extent and character of skin affection, when make your examination for osteopathic lesions, with a view of determining the primary cause of the condition. It may be a splanchnic lesion involving the organs of assimilation or elimination; it may be a trophic disturbance. These, as a rule, determining the location and extent of skin lesions, and, being in connection with the lesions affecting the stomach, liver and kidneys, the primary cause of most all dermatoses, excepting those due to sepecific infections. And in this connection we would advise special attention to involvement of the adrenal bodies, thyroid and other ductless glands as evidenced by the constitutional and skin symptoms. *For* they are an ever-present source of toxemia when their nerve or blood supply are encroached on by the osteopathic lesion.

The condition of the skin in myxedema is especially typical. The urine and stools should be examined with a view to determining possible sources of toxins also.

Treatment.—In our treatment of dermatoses I thing we are particularly fortunate in that our system of practice emphasizes that the primary cause is the thing to be corrected. Our treatment must therefore be twofold; first, corrective; and second, local. Sometimes the question is asked, "Is there not danger of 'driving in' an eruption too soon?" It is the almost universal opinion of experts that there is no danger of getting rid of an eruption too soon. So we can dismiss that from our minds.

The first essential in the successful treatment of the different dermatoses is to determine both the predisposing and the exciting causes. Then the part played in each case by the osteopathic lesion, whether it act by producing a constitutional condition, or by local trophic disturbance; the treatment here being strictly corrective. If the dermatoses be of the infective type, naturally the treatment will be for the control of the disease producing it. If the skin affection be due to faulty habits of eating, naturally we correct those. If due to parasites, use a parasiticide. If due to drugs, and you will be surprised how often this is true, stop them. In most all these cases we require to combine with the corrective work, a local antiseptic, for cleanliness, and to facilitate the healing process, also many times we need the local protective applications to relieve the pruritis. To the extent that these local applications produce rest of the part, and protect from dirt, infection and irritation, they are curative, but there their function ceases; the major part of the cure being dependent on the osteopathic treatment correcting the cause of trophic nerve disturbance, or the cause of toxemia, in the large majority of these cases. Caustics may be necessary to destroy circumstribed masses of tissue.

Mineral waters are beneficial only through their action on the bowels and kidneys, and by the beneficial action of heat to the skin as applied by means of the water. Rest in bed in some cases may be necessary, especially in some forms of eczema.

The use of the X-ray in certain malignant and tubercular skin lesions seems to have been attended with some success, but inasmuch as its application is fraught with considerable danger, both to the patient and operator, and its use is still to a large extent experimental, I do not go into it farther.

Phototherapy. — The application of light rays, whether by means of concentrating the sun's rays, or the artificial light, and exposing the local skin lesion to violet or blue rays, has been used in superficial skin affections with considerable success. One of our own profession, Dr. Day, has an apparatus for the treatment of certain local skin lesions that

has proven quite a help as a local application in epithelioma and certain other skin affections. Its action is dependent on the actinic rays of the spectrum being directed and concentrated on the skin lesion.

We have purposely avoided the mention of specific local antiseptics in the external treatment of dermatoses, because there are a number of preparations which will secure practically the same result, and I think each one here has become dependent on one or two local antiseptics which secure rest and protection to the affected part.

Dr. A. E. Wright is developing a system of treatment for skin affections by means of vaccines, the principle being to develop, by means of the stimulation produced by the administration of the vaccines, a higher state of efficiency of the protective substances *normally found in the blood.*

May we not by osteopathic measures accomplish this same result without the attendant danger of the administration of vaccines? I think so.

MECHANICAL PRINCIPLES OF THE HUMAN BODY*

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It would seem strange indeed if in an age when men fly through the air and hold wireless communication across the ocean, there should not be some equally momentous revolution in the field of the healing art. This is the age of the mechanical triumph of man over matter. This is the day of the realization of extraordinary dreams. What could be more daring than the idea of severing one continent from another? Yet the double conquest of the air and the huge task of cutting the canal are really not so momentous, not of such vital and far-reaching interest to all humanity for all time, as that discovery which has shaken the medical world to its very foundation and culminated here today in this great assemblage. None but the gifted seers can look into the future and prophesy to what extent will proceed the revolution in medical science from the application of mechanical principles to the therapeutic art.

The fact that this is an age of mechanical triumph is shown not only in the stupendous instances just considered, but in every line of science, art, industry and civilization. The work of the world today is coming into the very refinement of modern mechanism. The education of the youth of the world today is becoming a training in mechanics as applied to the particular line of work which the student selects. Theories, beliefs, traditions, all these are giving way to cold facts. These facts are the laws of mechanics. When we say mechanics, we mean to include the minute as well as the gross. Included in the realm of microscopic mechanics we have the science of chemistry and all the problems of the food, fuel and clothing supply of the world. And yet, crowning it all, shedding its steady ray of hope, shines clearly through the darkness of medical intolerance, unhampered by the baleful effects of poisonous drugs and the too ready knife of irrational surgery, the beacon of osteopathy.

The day of mystery in medicine is past. The family doctor is no longer an absolute oracle. The patient has discovered that he has a right to an opinion upon those matters about which tradition did not allow him to think before. The patient now knows that his body is a machine. He has become infected with the spirit of the times. He knows that this is a day of revolution, a day of the conquest of the impossible, a day of the invasion of the theoretical by the practical, a day of the entrance of the mechanical into those realms from which it had been barred in the past. He refuses to accept the statement that it is unscientific to

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have his body machine treated by an expert in human mechanics.

Human progress means the hastening of the time when we can do more work, when we can accomplish greater tasks with a less expenditure of time and strength than at present, when we may have, because of this, more leisure for the enjoyment of the arts and for intellectual and ethical pursuits, when we can attain to these by means of the application of force with still less waste than is applied in the present state of evolution. This ultimate condition is to be approached by means of a more perfect realization and utilization of the mechanical principles of the human body. Osteopathy is only one of the great human triumphs which will result from appreciation of the truths of the mechanical principles of the body. Just as we utilize these principles for the treatment of disease, other scientists will use them for the advancement of industry, art, education, music, ethics, intellectual advancement, and all of those altruistic, artistic, ethical aspects of our existence which appeal to the idealists. But for the practical, the vital, the immediate necessities of the race, it is for the osteopathic profession to avoid the temptation to stand pat, escape the danger of getting into the rut of letting well enough alone, and progress into the wonderful possibilities of mechanical treatment of disease, realizing that we are only upon the very threshold of osteopathic possibilities. Let us not get lost in the intricate maze of technicality of the minute. Let us always keep in view the fundamentals. What is more pitible than the picture of the scientific man so befogged by his contemplation of the macroscopic that he is oblivious of the microscopic? Without depreciating the marvelous discoveries revealed by the microscope, we must not forget that a philisophical bird's-eye view of the whole will sometimes lead us to vastly more important discoveries than the detailed contemplation of the minute.

There is a vast gap between physiologic and therapeutic knowledge. It is in this chasm that osteopathy is growing so fast that it has already built a bridge from one to the other strong enough for thousands of patients to cross in safety. The medical world in its modern scientific war upon disease has so concentrated its thought upon the pathological that it is blind to the basic principles of the normal. The simple mechanics of anatomy and physiology are thoroughly studied in the first year of all medical schools and then promptly buried beneath mountains of technical knowledge of drug chemistry, medical action of all substances upon the body, bacteria and their actions and the microscopic study of disease itself. But nothing about the normal! As a consequence we have the great army of medicine directing its fire upon a bogey of its own construction—disordered functioning which they call disease! Disordered function is only faulty mechanics, and the remedy is simply adjustment, coordination, correllation of body mechanical systems. The study should be of normal and abnormal mechanics, not of disease and drugs.

It would seem logical to first divide the mechanical principles of the body into structural and dynamic. Regarding the first division, it is unnecessary with an audience of osteopathic physicians to go into any details, as anatomy is such a fundamental principle of our philosophy as to become axiomatic. But with the second division this objection does not hold. The subject of dynamics certainly admits of prolonged consideration. We are constantly reading and writing and talking of anatomy and of adjustment as the very fundamentals and essentials of our belief and our work. We do this so much that it might seem that we have not time for a detailed consideration of dynamics. It is not only that we do not have time, but the field itself is so large and unexplored that we have no adequate guide to penetrate its depths.

Text-book anatomy forms the kindergarten of our work. This is followed by text-book physiology, but with all due respect to our institutions and to our instructors, I think it may be admitted that physiology is a subject not well understood and not adequately taught. Even, however, with the best understanding and the best instruction, phyisology is not such an exact science as anatomy, for it is in this field that authorities cannot agree, as well as in the field of anatomy. But it is not along the conventional lines of physiology that this paper would deal. For the purpose of the osteopathic concept, the great problem of dynamics may be considered in a far broader way than the confines of traditional physiology.

What is the greatest force in all nature? What is the one force which is constantly acting night and day throughout the entire life of the individual? Gravitation is the mother of all physical force. Here we find the secret of all dynamics. No osteopathic philosophy can be complete without the true conception of the ever-present and ever-active power of gravity as affecting the normal function of the living body as a whole, and every part, and as a most potent factor in health, in disease and in therapeutics.

The osteopath must get the proper perspective. He must stand far enough off to have the larger vision. It is not enough to feel of the spine, no matter how carefully and artistically it is done, but the osteopath must be able to use the plumb-line, both figuratively and literally. I believe firmly that a thorough physical examination of every puzzling case should include locating the centre of gravity, finding the variation from the normal equilibrium, estimating the strain of unequal pull of balancing muscles, and prescribing changes in shoes, poise, gait, posture and exercises to offset this handicap to recovery.

It does seem that physics has not been given due prominence in the osteopathic curriculum. We are so carried away by the brilliant results of our treatment and by the marvelous progress of our art, that we overlook one simple fundamental fact. In thinking of anatomy and physiology of the living body, we possibly have forgotten the fact that we must found all of this upon that which goes before, study the science of physics as a whole, the laws which govern the mechanics of all things, inanimate as well as animate. This is a world of law. Law treats of cause and effect. The technique of the laws of cause and effect is first applied in a larger sense to the world of matter, to all material substance. The student is not best fitted for consideration of anatomy and physiology and then for a study of disease and therapeutics, unless he is thoroughly grounded in the fundamental principles, the laws governing the mechanical relations of material things and forces. There is not time enough in the curriculum of the osteopathic college for a course in physics and it does not properly belong there. But a thorough knowledge of physics should be an entrance requirement of all osteopathic colleges. Osteopathy should not be satisfied with that hazy idea of physics displayed by the average possessor of a diploma from a high school. This person should have a knowledge of physics, but it is not one to satisfy an osteopath.

As a possible solution of this problem, and as a compromise for the present, it might be suggested that the subject of physics be made the most important entrance examination in our colleges, and be required in all cases, even for those students who present diplomas from high schools or other institutions.

In such a case, it would be expected that many applicants would fail to procure a passing mark on this subject. That would be the correct thing, as it would necessitate the student being conditioned. If the applicant can be admitted on all other subjects and has a condition on physics, it could be arranged

so that a special course could be given in this subject for students having this condition. The institution would then be able to teach such students physics in the manner desired.

May one be so bold as to suggest that we must have a mechanical imagination? Imagination is a vital necessity for the accomplishment of great work in any field. No physician of any school can be successful without a thorough cultivation of this power. All creative work, all work of adjustment and of healing, is but the materialism of an ideal.

As in general medicine, where we have the axiom that it is the patient and not the disease which the physician should treat, so in osteopathy when we discuss the mechanical principles of the body we must take the actual living body of the average citizen in his usual environment of a sedentary character. In medicine it has only recently been realized that the laws of the effect of medication upon *well* people do not apply necessarily to the effects of the same substance upon *sick* people. So in osteopathy the mechanical principles of the perfect machine do not apply always to the body of the average patient.

In considering the application of mechanical principles to the pathological body we have also to take into careful consideration the fact that physical forces are exercising a constant effect upon the body from the outside; that is, the mechanical effect of environment in the form of posture, occupation, inequality of exercise, imperfect ventilation and consequent abnormalities of respiration, inequalities of muscular development, fatigue, and resultant changes in circulation.

There are the mechanics of sickness as well as of health. So well is this fact established that we have classifications of the gross appearances of disease, the facies, attitude, expression, pose, gestures, posture, gait, habit; in fact, definite pictures of classic diseases. Then again we have the application of the same rule in microscopic life in disease. In some conditions in fact there is no other way to arrive at a diagnosis save by means of the microscope. This most advanced laboratory method of medical diagnosis is nothing more nor less than the vindication of the osteopathic philosophy. Nothing but an admission of the supremacy of the rule of anatomy, the osteopathic law of the mechanical character of disease as well as of health. Pathologically there is another point we must realize, and that is that we have mechanical *result* of disease, as well as cause. Disease always leaves its mark on the body. No matter how complete the recovery, the cellular structure always carries the evidence of the past.

No more dramatic vindication of osteopathic fundamentals could have been conceived than the revolution which is taking place in the medical world today in the amazing growth of the vaccine, serum and phylacogen therapeutics. Right here in Detroit one of the greatest pharmaceutical houses in the world is focusing all its facilities upon this new treatment, which threatens to so overshadow classic procedures as to relegate pills and potions to the junk heap of the days of universal blood letting and salivation. In its basic idea, this new therapy is but an open admission of the original pronouncement of Still that the human laboratory contains all its own medicines. These vaccines are nothing but an artificial method of utilizing the inherent microscopic mechanics of the body for the destruction of disease. Sajous' monumental work on the ductless glands is a boomerang to the medical critics of osteopathy, for it is the voice from their own ranks trumpeting to the world the fact that the osteopaths are right in their assertions that the body fluids, by their microscopic mechanical action, control both health and disease. Now follows Lorand in "Old Age Deferred," asserting that nothing but practical application of mechanics and com-

mon sense and the utilization of these glands are needed to keep death at a distance.

A most important and fascinating study of body mechanism is that of intra-abdominal pressure. This is a subject which has never been thoroughly investigated, and is a field ripe for the research work of the osteopathic school. Those who have studied a large number of cases of neurasthenia have been struck by the fact that in all of these cases, practically, there is a very considerable degree of splanchnoptosis. Now while the subject of splanchnoptosis has been given much consideration on both sides of the water, the subject of intra-abdominal pressure, which is so closely related to it, has been barely touched upon. The effects of splanchnoptosis have been explained to be the symptoms presented in various of these neurasthenic states, without regard to the far-reaching possibilities of the effect of alteration of intra-abdominal tension. The pulling, dragging and hanging down of the abdominal viscera and the consequent strain, and the pressure of various organs upon each other and upon the pelvic viscera, blood vessels and nerves, have been the explanations of the condition as it has been classically discussed. If you will use the sphygmomanometer or some other instrument to actually measure the tension of pressure inside of the abdomen and pelvis in different positions and conditions of ptosis, your eyes will at once be opened to extraordinary possibilities from a consideration of the causes and effects of intra-abdominal pressure.

We are all familiar with the increase of tension of the abdominal wall evidenced when the patient coughs or laughs or sneezes or strains at stool or in labor, but possibly it has not occurred to many of us to consider that there is a considerable degree of constant internal tension during quiescence. If we consider the gross anatomy of the abdominal and pelvic cavities, which we must here look at as one cavity, we will notice that the diaphragm forms the superior boundary, the pelvic floor the inferior, the abdominal musculature and fascia the remainder. We know that all striated muscle has what we call a normal tonic contraction. Admitting this, when we see the extensive area of the abdominal musculature, including the well developed transversales and the large and powerful recti muscles, we realize that some pressure is accounted for here. Then the structure of the diaphragm, with its remarkably long muscularly developed crura reaching far down to even the fourth lumbar vertebra, we see what a pull or push down it has upon the abdominal viscera.

By the use of the sphygmomanometer with the bag in the rectum it is ascertained that the pressure in the organ with the patient in the erect posture is about 25 mm. mercury. If the patient is then placed in a horizontal position this pressure is reduced to 15 mm. If he will assume the quadruped posture this pressure entirely disappears and is replaced by a negative pressure of minus 8 mm. The lifting of a heavy weight will increase the pressure to 100 mm. Straining at stool will put the mercury to about 70 mm. A cough will elevate it to about 100. The same experiments performed in the stomach show a positive pressure of from 4 mm. during expiration and 12 during inspiration.

But the importance of intra-abdominal pressure is not confined to local conditions. The real function of intra-abdominal pressure is a circulatory one, and the effect is upon the whole body. The abdominal wall and the diaphragm are antagonistic but they are co-ordinated, and the pelvic floor must also participate in this action. The pressure action of all these muscles upon the body cavities causes a greater pressure in the abdomen than in the thorax, just as in the previous illustration it is shown that the pressure in the rectum is greater than in the stomach. From the viewpoint

of this argument, we must not consider the diaphragm primarily as a muscle of respiration. By its direct attachments upon the pericardium the diaphragm is in a way a circulatory muscle, as it directly influences dilation of the heart by pressure on the pericardium. But a much more important function is the increasing of the pressure in the abdomen. We know that the blood pressure in woman is less than in man, and we know that woman uses her diaphragm very much less than man. In enteroptosis, when the abdominal organs sag downwards and the intra-abdominal pressure is very much lower than normal, we find symptoms of extreme neurasthenia. This ptosis means dilated abdominal blood vessels, which, as you know, are the largest in the body. These blood vessels are dilated because of lack of pressure. Support of the abdominal wall and increase of intra-abdominal pressure contracts the blood vessels. While they are dilated the brain and nervous system suffer from anaemia and low blood pressure. When they are contracted the blood is forced back where it belongs. In other words, enteroptosis is not only a concession to gravity in the abdomen, but it helps gravity to drive the blood away from the brain, while increased intra-abdominal pressure overcomes the attempt of gravity and forces the blood back into the cranium.

We osteopaths who are so particular about the position of bones must not overlook the fact that an important principle of the philosophy of the mechanics of the body is the development of the bones themselves as well as their relative position. As the bones form the supporting structure of the entire body it is essential that the osteopath should do everything possible to see that the quality as well as the position of his super-structure is good. The importance of this principle, of course, is during the period of growth and development of childhood and youth. Nutrition is not the entire problem in growth. Growth is the result of reaction to stimuli. Activity, that is muscular exercise, means the growth and development of bone, and the reverse means not only cessation of the strengthening of the super-structure of the body, but the X-ray and the autopsy show us it means actual absorption.

Some of the smallest parts of our mechanism are among the most important. As an example of this, let us take the teeth. At the first thought we would conceive of the teeth solely from the standpoint of the necessity of thorough mastication for the purpose of correctly performing the work of digestion. So far so good, but this is not the only vital problem of the teeth and not by any means the most important feature from the mechanical standpoint. An astonishing fact was discovered by Dr. Lawrence Baker of Harvard University in experiments upon animals. He removed the teeth upon one side of the mouth and the result was that nearly all the bones of the entire skull were markedly affected in their development. But this was not the greatest nor the most startling result. The bones of the spine and of the thoracic cavity were obviously affected in their development as the result of the removal of half of the teeth.

Dr. Stillwell of Cincinnati claims that the muscles of mastication are the most important controlling developmental factor in the growth and activity of the sinuses and cavities of the skull, as upon their activity depends the mechanical stimuli which direct nutrition to those parts.

The mechanism of nutrition should not be confined to a consideration of the alimentary tube. The problem of nutrition is not primarily one of diet. If it were, there would not be such a sad and endless parade of anaemic, pale and wan skeletons trooping to the osteopathic physicians. They would have been cured by some of the army of medical specialists with their elaborate diet lists, none of which agree by the way. The problem

of nutrition is the study of the interrelation of the mechanical functions of the body which control posture, circulation, respiration, locomotion, temperature, oxidation, etc., fully as well, if not more, than those of mastication, peristalsis, osmosis, etc. Oxidation and elimination are so vital that it is absurd to focus the attention entirely upon a selection of foods until we know how the patient is going to dispose of them. It is far less absurd to let a patient eat any reasonable thing he wants to if the osteopath will get his mechanism into the best possible running order, not only by specific vertebral adjustment, but by corelating other mechanical functions so that the fuel will be consumed and the energy distributed and the residue disposed of without injury.

One mechanical factor of individual development and health which we must remember is the vital interdependence of bodily movement and brain growth, and consequently of mental power. The only way in which an infant's brain grows is by means of the stimuli which come to it from peripheral nerve endings and body movements. If a limb is amputated, the brain area controling it never develops. This is not only a loss of cortical matter cells, but is a lost factor in the development of the entire brain and mentality. These facts carried out to their ultimate conclusion convince us of the necessity of proper exercise of the mechanics of the entire body if the patient is to have an efficient and normal intellect.

While the writer believes most firmly in so-called ten-finger osteopathy and is confident that the hand is the most perfect instrument possible for therapeutic purposes, he does not think it possible to have too great perfection in the mechanism of diagnosis by instruments of precision. We want all the knowledge we can get about the machinery of our patients and among the great helps to the osteopath are the sphygmomanometer, sphygmogram, microscope, blood and urine examination, opthalmoscope and all other devices for accurate measurement of the mechanical condition of living tissue.

The plumb-line is one of the most important instruments of precision in diagnosis from the standpoint of the gross mechanics of the body. It is neglected by nearly all physicians, mainly because it is not expensive, not elaborate nor intricate, and because some people think it lacking in dignity, as it is so commonplace. In using the plumb-line for spinal diagnosis, the best method is the one which begins from the opposite end to that usually used. Instead of dropping the line from the uppermost cervical spines in order to see how closely the others approximate to a straight line from that point, as is usually done, it is really more accurate and much more simple to make the measurements from the other end by letting the line fall in the cleft of the buttock or anal fold, and then compare the line of spinus processes with the tape. The sacrum is the foundation, and what you want to know is the exact poise of the superimposed vertebrae, whether more of the trunk is more on one side of the tape or the other. It makes the experiment more vivid if the weight is suspended upon a black instead of a white string, and if the spines are marked with greased paint or a very soft black flesh pencil.

These directions apply to lateral observations. The first and simplest experiment for ascertaining the antero-posterior condition is to have the line resting against the sacrum and observe whether or not it touches the dorsal convexity. It should touch it. If it does not, the centre of gravity is displaced because the patient is leaning too far forward, and if the dorsal convexity displaces the cord far backwards, it is a deformity of the round shoulder variety. On the lateral aspect of the body you can observe with the plumb-line whether or not the pelvic inclination is normal. If it is the anterior superior spine and the tubercle of the

pubis will be in the same vertical plane. Another very useful and simple instrument for diagnostic purposes is the caliper or pelvimeter for instantaneous measurement of antero-posterior thicknesses.

Most of our best osteopathic authorities agree that in correcting lesions the only way is to begin at the bottom and correct the lower ones first. Following out this plan in the general consideration of the body we will find that there are a number of mechanical conditions that are frequently overlooked. The lowest part of the body is the feet. How many of us always examine the feet? Why should we think we have begun at the foundation when we examine the innominates? Yet many a case can be cured after other operators fail by simply discovering and correcting a foot lesion disturbing poise, throwing the centre of gravity out and thereby causing constant strain and waste of force in the effort of one set of muscles to pull the body over where it belongs. Sometimes the lesion is not actually in the feet. It may only be the shoes. If badly constructed or ill-fitting shoes are upsetting the equilibrium of the patient, it is useless to treat the cervical vertebrae until the lower lesion is corrected.

It may be neither shoes nor feet, but entirely faulty foot posture. So the key to the problem seems to be that the skillful osteopath is the one who is able to apply the philosophy of Still to the entire body of his patient, not merely to get a hobby on fixing innominates as a cure-all, or laying all ills to atlas lesions, vital as both of these are. It is a matter of the calm, scientific judgment of the operator with a mechanical imagination, anatomical knowledge and skillful fingers. The personal equation is an important factor, but success lies in a true appreciation of Still's philosophy, an ability to corellate all the different mechanical principles of the whole body and all of its functions, and its environments to realize their vital interdependence and the far-reaching effect one may have upon the other, then to know how to fix the wrong and, last but not least, and this is one of the writer's special hobbies, how to so strengthen the body or its weak part or both, that the condition will not recur.

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URINALYSIS IN DISEASES OF THE ALIMENTARY SYSTEM

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Since the fundamental principle of our system of therapeutics is structural adjustment, the basis of every osteopathic diagnosis must be the physical examination. No thorough-going osteopath will venture a diagnosis without having made such an examination; neither will he, on the other hand, neglect or overlook any legitimate means of help within his reach in making diagnosis and in outlining the course of treatment. There is no other procedure among all the aids which he may use that is of so much value in confirming a diagnosis, in settling a differential diagnosis, or in determining precisely the functional effect of the physical lesion, especially in alimentary disturbances, as a thorough urinalysis.

I think that with most physicians there is a feeling that an examination of the urine is called for only in cases of suspected renal or diabetic conditions, and that it is sufficient to determine whether the urine contains one or the other of the elements present in these conditions. The tests for albumin and sugar are a necessary part of a urinalysis, but it should be more than an examination for abnormal elements; it should be as well a determination of the proportionate quantities of the more important normal elements. It is an accomplishment of no little worth to be able to confirm unquestionably the diagnosis of a case of Bright's disease,

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for example, by urinary analysis, but it is of far greater worth to be able to detect by this means the metabolic changes which mark the beginning of this condition before organic changes have taken place, while there is yet time for preventive treatment; for in too many cases the diagnosis is made too late to be of any therapeutic value.

Among the exciting causes of not only neurotic troubles, but of organic diseases as well, there are none, in my estimation, that take precedence over those digestive and metabolic disturbances and derangements in which the system is filled with the poisonous products of incomplete digestion, thus not only throwing upon the emunctories, especially the kidneys, an unusual amount of work in secreting an increased quantity of the natural excretory products, but bring into contact with them abnormal elements whose toxicity is injurious to, if not destructive of, their more delicate tissues. Another evil result of these metabolic disturbances is seen in the lowering of the alkalinity, or the "reactivity to acids," of the blood, thereby reducing the vital resistance; for there is undoubtedly a direct relationship between the blood's alkalinity and its defensive and anti-bactericidal power. Sajous says that "the defensive properties of the body fluids—the blood, lymph and serum —can be exercised efficiently only when their alkalinity is adequate." Charrin gives the blood's alkalinity first place in the immunizing processes of the body.

Having in mind the conditions as shown by the physical examination and the facts obtained from the history of the case, the most commonplace part of the urinalysis, as noting the reaction, or the quantity, or the specific gravity, or the color, may give us diagnostic hints that will be of great advantage in the more exacting part of the work.

Reactions.—Alimentary conditions affect the reaction of the urine to a marked degree. Although normally acid, it may be physiologically alkaline on a vegetable diet, or for two or four hours after a full meal of any kind of food—the rise of the "alkaline tide," as it is called, during which time the urine may be turbid from the precipitation of phosphates. About the only pathological conditions of the alimentary system producing alkalinity are gastric or intestinal hemorrhage and marked deficiency or total absence of hydrochloric acid in the stomach. This physiological change, or "alkaline tide," in the urinary acidity is sometimes made use of to determine the status of the hydrochloric acid secretion, a marked lowering of the acidity indicating an active state of HCl secretion, and an unappreciable reduction indicating a deficiency or an absence of HCl.

The degree of acidity of the urine is a matter of much interest, being as it is an index of the reaction or chemical condition of the body fluids, especially the blood, and the estimation of the acidity is one of the important parts of a urinalysis. From the investigations of some of the best authorities on the subject it has been shown that there is a distinct association between high acidity and autointoxication, indicanuria, and decreased elimination of urea. There are different ways of determining the acidity and of expressing the degree of acidity. I like Benedict's method of expressing it in degrees or acid units, and for this method of expressing the acidity a modified form of Folin's test for determining the degree of acidity can be used conveniently. To 10 cc. of urine add one drop 1% alcoholic solution phenol-phthalein, and then add drop by drop decinormal solution sodium-hydrate until a faint pink color is obtained. The number cc. of hydrate solution required to neutralize the acidity of the 10 cc. urine is noted, and each cc. so used is counted 1 degree of acidity. Normally about 3 cc.—perhaps a little more—will be required, thus giving an acidity of 30 to 40 degrees.

Quantity.—It will not be necessary to enumerate the many physiological factors upon which the quantity of urine depends. The usual quantity is 1200 to 1800 cc. (40 to 56 ounces) in the adult, varying almost directly in proportion to the body weight, being about one-half cc. per hour for every pound of weight. The ratio in children is higher. A persistent polyuria always suggests diabetes, but such a diagnosis should be made only after a chemical test. There are atonic conditions of the stomach in which the quantity of urine is increased, the increase being due to the increased amount of water necessary to satisfy the unusual thirst which often exists in such conditions. A moderate increase may be due to an arterial sclerosis in the splanchnic area and is often a very important diagnostic symptom. The amount may be below normal following vomiting or diarrhea.

Solids.—In the daily urine of a healthy adult there are from 60 to 70 grams of solids held in solution. Of these solids the organic constitute from 35 to 40 grams, the inorganic 25 to 30 grams. The specific gravity gives us some idea of the total solids, especially when taken in connection with the total output of urine, and thus considered may suggest tests that otherwise might not have been thought of. The total solids may be roughly estimated by the rule given in the physiologies of multiplying the last two figures of the specific gravity by the coefficient 2.33, or, as some suggest, 2.6, the result being the amount of solids in grams per 1,000 cc. of urine. In pathologic urines this is not reliable, of course. The methods of determining exactly the total solids are rather complicated and I will not go into them here. The degree of specific gravity depends in a large measures upon conditions in the alimentary system, yet but little knowledge of alimentary conditions can be gained by the specific gravity alone. It does not tell whether there is a physiological disturbance of the proportions of the normal elements or whether there are present one or more abnormal elements. These questions can be settled to some degree of satisfaction by chemical tests; and, as I have suggested before, it is of as much importance to know whether a normal element is absent as it is to know whether an abnormal element is present.

Urea.—Of the total solids the organic element urea comprises almost half, or 25 to 30 grams, or 1½ to 2½%. It is the chief end-product of proteid metabolism, and its amount depends largely upon the nitrogenous intake. Sone one has suggested a quick method of determining the precentage of urea, based on what he claims to have observed in thousands of urinalyses, that the last two figures of the specific gravity correspond closely with the percentage of urea; thus a specific gravity of 1,015 would mean 1.5% of urea. This rule does not hold good in urine containing albumin or sugar. As a means of determining chemically the quantity of urea, the method described by Dr. Atzen in the JOURNAL OF THE A. O. A., November, 1911, is very satisfactory—25 cc. chlorinated soda (Labarraque's solution) and 5 cc. potassium bromide in a Doremus ureometer.

The amount of urea excreted has considerable significance in alimentary conditions. In cancer of the stomach it may fall as low as 7 to 12 grams, and by this means a differential diagnosis may be made between cancer of the stomach and the benign conditions, as pyloric stenosis, in which there is no reduction. In hepatic derangements, such as cirrhosis or atrophy interfering with the flow of bile, the output of urea is diminished. Any intereference with the blood-flow in the liver, whether pathological or physiological, cuts down the elimination of urea, and in many of these cases the effect of treatment can readily be seen in the increased output of urea.

Uric Acid.—Uric acid is another end-product of proteid oxidation. Its normal

output bears a rather well-fixed ratio, about 1 :45, to that of urea, but in pathological conditions, as those of the liver just mentioned in which the urea output is diminished, the elimination of uric acid is much increased. In diabetes there may be an increase or decrease in the amount of uric acid, varying inversely to the excretion of sugar. The quantitative determination of uric acid is rather intricate for the ordinary practitioner, but there is a very simple test which is claimed to show conclusively whether there is an abnormal excretion. The upper portion of the urine in a test tube is boiled and 4 or 5 drops of a 4% solution of acetic acid are added. After standing over night if there is an over-production of uric acid you will find a number of clusters of uric acid crystals where the acetic acid has come in contact with the urine, their abundance depending upon the excess of uric acid. Normally no crystals will appear.

Chlorides.—The chlorides have received as much attention as any of the other inorganic constitutents of the urine in the diagnosis of digestive troubles owing in some measure, no doubt, to the hope that some idea might thus be obtained of the HCl secretion in the stomach, but it seems that so far not much of practical value has been determined. It is claimed that following vomiting and diarrhea the chlorides are diminished, and also in cases of serious discharge or inflammatory exudate, especially in purulent exudation. Webster says that in dilatation, ulcer and cancer of the stomach there is a marked decrease, some cases of the last named disease showing a complete absence of chlorides. In making the test for chlorides with silver nitrate solution any albumin that may be present should be removed by boiling and filtering. The filtrate is acidified with a drop or two of nitric acid and then treated with a few drops of a 10 per cent. silver nitrate solution. The density of the white precipitate will give an idea of the amount of chlorides.

Phosphorus.—Phosphorus plays an important part in the economy of the system, being a component part of the nuclein of all cells, including the leucocytes, the myelin of the nerves, the cell bodies of the neurons and their dendrites, and of the bones. The phosphates constitute a considerable portion (3 to 3½ grams) of the solids excreted in the urine. The larger part of the phosphates thus excreted are derived from the food, only a small portion coming from tissue waste. In cases of starvation only is their excretion a measure of nuclein and nerve tissue waste. In ordinary conditions they depend more upon the digestion and assimilation of the phosphoric constituents of the food. In diabetes the excretion of phosphates varies like uric acid—in inverse ratio to the output of sugar.

I have used a quantitative test for phosphates which is very satisfactory and not difficult to make. The solutions necessary are uranium nitrate (36 grams in 1,000 cc. water), an acetic acid mixture consisting of 30 grams glacial acetic acid and 100 grams of sodium acetate in sufficient water to make 1,000 cc., and tincture of cochineal—a few granules in 25% alcohol. Filter 50 cc. urine and add 5 cc. of the acetic acid mixture, and a few drops of the cochineal solution. When heated to boiling point, drop in carefully the uranium nitrate until a greenish color is seen in the precipitate which will not disappear on stirring. Twenty cc. of the uranium solution correspond to 0.1 gram P_2O_5 and the amount of P_2O_5 is calculated on this basis. The normal amount in 50 cc. urine is about 0.1 gram and will require about 20 cc. At this rate there will be 0.2 grams in 100 cc. and 3 grams in 1,500 cc. urine.

Sulphates and Indican.—The sulphates which occur in the urine to the amount of 2 to 3 grams per day are constituents of much clinical significance in alimentary disturbances because of the association

of one form of this element with conditions of intestinal decomposition and putrefaction. Its source is not confined to the alimentary tract, but in this paper only alimentary conditions will be considered. These putrefactive changes produce a number of substances of practically the same composition, of which indol is the most abundant. The main part of this substance, indol, leaves the organism with the feces, but in abnormal conditions a considerable portion of it is resorbed into the circulation and there oxidized, form indoxyl. In this form it combines with potassium-sulphate and forms indoxyl-potassium-sulphate, or indican. The extent to which this is eliminated in the urine is a reliable index of the degree of absorption of the products of intestinal protein decomposition. A number of tests for determining approximately the amount of indican have been worked out. Jaffe's, or some modification of it, is most frequently used. Equal parts, say 5 cc., of urine and concentrated hydrochloric acid are taken, and to this a few drops of chloride of lime or of peroxide of hydrogen are added, and all well mixed. Two cc. of chloroform are now added and thoroughly shaken. If indican is present it will be oxidized into indigo blue and taken up by the chloroform. The depth of the coloration can be taken as an approximate estimate of the amount of indican in the specimen. If the chloride of lime is not used to excess no blue coloration, or at most a very slight tinge, will be observed in normal urine.

A positive test for indican taken in connection with what has been learned from the examination and the history of the case will give some idea of the part of the alimentary tract at fault. It may be the lower bowel, since it is below the ileo-cecal valve that putrefactive processes normally occur. It may be the small intestines in cases of low activity in which peristaltic action is diminished. Obstrutive jaundice, or duodenal ulcer, may be the cause. Simon states that an excess secretion of indican is indicative of a decreased proportion of HCl in the gastric juice. In most cases there is a low status of stomach and intestinal activity, even of atony of these viscera. There is not much doubt that the presence of free indol in the circulation has a depressing effect upon the nervous and muscular systems, and in some of these cases of stomach and intestinal atony we may well ask whether the indol is the cause or the effect. From the osteopathic point of view there must be some predisposing cause in the beginning— a lowering of the vitality from intereference with the innervation and circulation, or dietary indiscretion, or both.

Albuminuria.—The phase of urinalysis under consideration has but little to do with albuminuria, as there are but few pathological states of the digestive system in which this condition exists. In cancer of any part of the alimentary tract, or in gastric hemorrhage, it may be present. Alimentary albuminuria is generally considered physiologic, but Senator and other good authorities have lately advised close investigation of the stimulus or stimuli leading to the excretion of albumin before making a diagnosis in these cases. In this connection I wish to emphasize the point I called to your attention in the beginning—the role of faulty metabolism as a causative factor in disease. Webster, of Chicago, and Wilcox, of Philadelphia, have both spoken recently of "perverted metabolism" and the "poisonous substances developed within the organism" among the causes of nephritis.

Glycosuria.—No other feature of the general subject of urinalysis has been more thoroughly investigated than that of glycosuria, and yet much remains to be learned. Glycosuria may be physiological under certain conditions, but these conditions need not be considered here. Its pathological form may be taken up with propriety in this discussion, since it

is caused by the failure of one or more of the organs of alimentation to do their work in converting and elaborating the products of carbohydrate digestion. One will sometimes find a case of glycosuria in which the sugar disappears when the carbohydrates of the diet is restricted to the assimilation limit or when the diet is entirely free from carbohydrates; but the real or typical cases are those in which glycosuria persists after complete exclusion of carbohydrates from the diet. Webster says: "In this type there is a constant formation of carbohydrates from the protein and fats of the food. The liver seems to be capable of storing up glycogen in the usual amount, but the system in general is practically unable to utilize the sugar brought to it. In consequence of this the liver cells are called upon repeatedly to convert the glycogen reserve into glucose, and as a result the blood becomes laden with sugar. Even under these circumstances the hyperglycemia would not cause a glycosuria if the normal ferments of the blood arising from the internal secretions were present." Pflüger suggests as a cause of diabetes the disturbance of the nervous relationship which he claims exists between the duodenum and the pancreas. The urinary symptoms that suggest diabetes and the qualitative tests for sugar need not be discussed. A number of quantitative tests are outlined in all works on urinalysis. Fehling's is sufficiently accurate for practical work and probably presents fewer difficulties than any of the other chemical tests, in the way of apparatus, solutions and the calculation of the results. I have used a fermentation test which, while probably not so accurate as the chemical tests, is said to be correct within one-tenth per cent. If the specimen is not acid, it must be made so. About a quarter of a cake of Fleischman's yeast is crumbled into two or three ounces of the urine in a flask or beaker and allowed to stand at a temperature of not less than seventy degrees until a qualitative test shows no sugar. This may be twenty-four hours or more. The specific gravity is carefully taken before the yeast is added and after fermentation it is filtered and taken again. It will be found that the fermentation has lowered the specific gravity markedly, especially if much sugar be present. The difference in the specific gravity before and after fermentation is multiplied by 234 to obtain the percentage of sugar.

Color.—The color of normal urine has a wide range of variation, running from a pale straw to a brownish-yellow tint, the depth of color depending upon the concentration or specific gravity. In diabetes we find this rule reversed and we have a very pale urine with a high specific gravity. The chief pigment in the coloration of normal urine is urochrome. In certain pathological conditions there are present abnormal chromogens which are made the basis of a series of tests of considerable clinical value. Erlich's Diazo reaction, as it is called, is one of the best known of these, since it was formerly regarded as pathognomonic of typhoid fever, but as it had been shown that not more than eighty per cent. of cases of typhoid give a positive reaction, a negative reaction would not necessarily exclude this disease; neither would a positive reaction prove its presence, since a number of other pathological conditions give a positive reaction.

The Russo test for typhoid. while comparatively new, is said by those who have experimented with it to be of more diagnostic value than the Diazo reaction. It is claimed that this test is shown as early as the second day of typhoid fever and that it persists throughout its course. The technic is very simple: To four or five cubic centimeters of urine in a clean test tube, add four drops of 0.1 per cent. aqueous solution methylene blue and shake vigorously. If typhoid be present, the blue color of the mixture will turn to an emerald or mint green hue. One dif-

ficulty comes in the ability of the practitioner to recognize the tints of green which may be present. If the course of the disease be favorable, the color becomes more and more blue, while if unfavorable, the green tint persists. This test gives a positive reaction in measles, smallpox, chronic and suppurative tuberculosis, but is negative in varioloid, varicella, scarlet fever, miliary tuberculosis, appendicitis and malaria. Rolph and Nelson have pointed out that the one fallacy to be borne in mind is that urines containing bilirubin react to this test.

About the only color symptom of any diagnostic significance in alimentary derangements is that produced by the presence of bile. It can usually be detected without difficulty in the color of the urine itself, but more readily in the foam when shaken, which if bile be present is yellowish or yellowish-green. Normally it is practically colorless. If a chemical test is thought necessary, Smith's is as easy to make and as reliable as any other. A one per cent. alcoholic solution of iodine is carefully floated upon the urine in the test tube. If bile is present, a beautiful emerald green ring is noted at the point of contact. Gmellin's, another test with which you are all familiar, may be used and at the same time may be taken as a test for indican—a brown ring being noted at the point of contact if indican be present. Either of these tests for bile may be used in differentiating between appendicitis and biliary colic. Blood pigment, which can under ordinary circumstances be detected in the color of the urine, is not often found in stomach or intestinal troubles, although it may occur late in gastric cancer or hemorrhage or malignant conditions of the small intestine.

Metcalf Bldg.

THE MOVEMENTS OF THE VERTEBRAL ARTICULATIONS AND THEIR SIGNIFICANCE*

Walter E. Bailey, D. O.
St. Louis, Mo.

Dislocations, or more properly speaking, subluxations of the spinal vertebrae, must be produced in the direction of the normal motion of the individual articulation involved. It has been found that complete separation of the articular facets of the vertebrae may be accomplished only by the fracture of the articular facets and great laceration to the ligaments of the articulation.

The osteopathic lesion, usually found, is not this gross injury, but instead consists of an exaggeration or over-extension of the normal movements permitted by the articulation. This over-extension is really a sprain, which causes an irritation and congestion of the tissues in and around the intervertebral foramina. This irritation and congestion, incident to the bony lesion, produce a lessened or perverted function of the nerve cells in the corresponding segment of the spinal cord. This is accomplished through interference, by pressure, upon the vessels carrying blood and lymph to and from these cells at the point where the vessels pass through the intervertebral foramina. A lesser effect is accomplished by the pressure upon the nerve fibre, because the nerve fibre is less sensitive to extraneous impulses than the nerve cell from which it derives its nutrition and impulses.

It is well known that the ability of a cell to adapt itself to a changed environment varies inversely with its degree of development. The power of adaptation is least with the cell having the highest function. The nerve cell is the most highly developed of any in the human mechanism, so we find that a diminution in either the quantity or the quality of its

*Paper and Demonstration before the St. Louis Osteopathic Society, Nov. 9th, 1912.

blood supply causes a perversion of function in the nerve cells and in the organs which they supply with nervous impulses. The same degree of interference with the nutrition of a muscle or connective tissue cell would not produce such perceptible results because of its lower type of function.

The correction of any dislocation, as at the hip or shoulder, is best accomplished by causing the bone to traverse the same pathway in returning to its normal position, as that which it traversed when the dislocation was produced. By this method the least amount of additional injury is inflicted upon the surrounding structures. This is due to the lesser amount of force required to cause the articular surfaces to glide one upon the other, rather than expending a great deal of energy in forcibly approximating the articular surfaces through mis-applied corrective forces. The same rule that is followed in the correction of these larger articulations will be found to give the best results in the correction of subluxations such as those of the vertebral column.

We have seen, first, that lesions occur through exaggerations of the normal movements of the articulations; second, that the least resistance to replacing the bones, comprising an articulation, into their normal position is by making them pass through these same lines of abnormal motion, but reversed. Therefore, we osteopathic physicians, who are vitally interested in the reduction of subluxations must thoroughly acquaint ourselves with the anatomy of the structures controlling these articular motions and the motions themselves. Then we will not depend upon chance for adjustments, nor use unnecessary force in an unscientific manner, but our operations will be in accordance with scientific mechanical principles. By scientific I mean knowledge based upon fact.

The articular facets of each vertebra are four in number. There are two superior facets which articulate with the inferior facets of the vertebra above; two inferior facets which have a similar articulation with the superior facets of the vertebra below. At the top of the vertebral column, as there is no vertebra above, the superior facets of the atlas articulate with the condyles of the occiptal bone. At the bottom of the column, the inferior facets of the fifth lumbar articulate with the sacrum.

These articular facets are covered with hyaline articular cartilage and are surrounded by capsular ligaments. These capsular ligaments are kept free from folds through the action of the ligamentum subflavum. The ligamentum subflavum attaches to the laminae of each vertebra and connects the vertebrae with one another. Piersol ascribes to this ligament the function of returning the vertebrae to their normal position following the innumerable slight displacements to which they are subjected. If this is the duty of the ligamentum subflavum, most osteopaths will agree that it very often fails in the performance of its work and function.

There has been considerable discussion by anatomists as to whether the articular facets of the vertebrae were the determining factor in the types of motion allowed in the articulation, or whether the articular facets were only of minor importance and accommodated their form during development to aid in the movements of the vertebral column. It is sufficient for our purpose, however, to know that they serve as indicators of the motions that may take place in the articulation, bearing in mind the fact that separation of the articular facets does not occur.

To avoid confusion of nomenclature, in the following description, we must remember that the direction in which an articular facet is said to face is determined by a line drawn at right angles to its plane surface. The cervical region permits of a large amount of rotation, but we shall find that most of it occurs at the atlanto-occipital and at the atlanto-

axial articulations and a lesser amount of rotation occurs between the other cervical vertebrae.

The atlas presents two superior articular facets, as oval concavities, with the outer wall higher than the inner. Anatomists tell us that in most spines one facet is slightly anterior to the other. This causes a twisting of the head with compensatory changes in the spine below the lesion. It would be interesting to determine whether this condition, which the medical men have noted, is really a physiologic and normal condition or is that which they have noted some of the lesions which the osteopath finds so frequently. The occipital bone has the motions of flexion and extension upon the atlas. These movements are carried out as in nodding. Slight rotation of the occipital bone upon the atlas may occur, but only by a previous tilting of either the atlas or the occiput; and with a separation of their articular facets. Many osteopaths, among whom is A. S. Hollis, D. O., of the A. S. O. Faculty, are exponents of the theory that with every articular lesion there is limitation of the motion in the individual articulation and that the presence of the lesion may be determined by testing for this limited motion. This limitation is due to both the direct and the indirect irritation to the spinal musculature, for we must remember that each spinal nerve sends a posterior division to the spinal musculature. Limitations in the motions of this particular articulation may be tested by the following method:

(Demonstration): With the patient lying upon the back and the operator standing at the head. Place the third or middle finger of each hand behind the transverse processes of the atlas. Allow the palm of each hand to rest against the patient's jaw. With the atlas fixed, the head is flexed and extended through the pressure exerted with the palms of the hands. In this manner the degree of motion may be determined.

The facets of the occipital bone face in, just the opposite direction to those superior facets of the atlas with which they articulate. The same is true of the inferior facets of the other vertebrae. In each case they are just the opposite of the superior facets of the vertebra below.

The axis has superior facets which are circular and present upward and slightly outward. These allow for rotation to a marked degree. This rotation is used in making the lateral motions of the head. There is also an articular facet on the odontoid process of the axis. The atlas turns on this as a vertical pivot. The extent of the rotation between the atlas and the axis may be tested as follows:

(Demonstration): With the patient on the back and the operator at the side. Place the fingers of one hand on the tranverse process of the Axis and against the transverse processes of the cervical vertebra below, in order to secure a fixed point. With the other hand roll the head from side to side. At the limit of the motion of that particular articulation, the rest of the cervical region will be felt to participate in the movement.

In the remainder of the cervical region the superior facets face upward and backward and are nearly plane. This allows for a rotary motion and for some laterial bending. The two, however, are always somewhat combined. The amount of motion between any two of the vertebrae is very slight, as the whole region participates in most movements. In making cervical corrections, if the head is bent too far backward, the laminae of the vertebrae lock and the attempt at correction is defeated.

The dorsal region has superior articular facets which are plane and nearly vertical. They face backward. This allows for various types of motion between the individual vertebrae. There is flexion which seems to be greater in the live model than is actually the case. If the patient is asked to bend forward, the thorax moves practically as a whole upon the dorso-lumbar junction. There is also extension which is greatly limited on account of the locking of the laminae and the close approximation of the articular facets when this movement is executed. There is also, as we have said before,

some side or lateral bending accompanied with rotation.

At the last meeting of our society, the possibility of having a single rotated vertebra was discussed. In my observations of the spinal column it was evident that if a vertebra were tilted laterally, with compensatory changes in the intervertebral disc, that the spinous process of the vertebra would be deviated from the plumb-line of the spine and that this is the condition which we find and correct when we find what appears to be a single rotated vertebra. The methods by which these lesions are usually corrected would be suitable for that of a laterally tilted vertebra. This tilting would account for compression on one side and for those cases in which uni-lateral disturbance is noted.

Limitations of motion in the dorsal region may be tested for in the following manner:

(Demonstration): Patient sitting on chair or table and the operator at the rear. Place the thumb of the one hand over the transverse process of any particular vertebra above the fixed point in its normal condition will be found to move against the thumb of the hand making the fixed point.

In the correction of lesions in the dorsal region where it is desirable to use the head as a lever, the operator should brace the cervical region against shock and injury by allowing the forearm to drop into the hollow of the neck, holding it rigid. In this way the two hands are left free to localize the movement to the particular joint by means of the two fixed points. For this technique I am indebted to Frank Pratt, D. O.

With the lumbar region we shall also consider the 12th dorsal vertebra whose functions and facets closely resemble those of a typical lumbar vertebra. The superior articular facets in this region are concave, vertical and face chiefly inward. This allows for extension and flexion, but also for some lateral bending. To test for the motion here, the following procedure is necessary:

(Demonstration): Patient sitting. Place the thumb of one hand against the tranverse process of the vertebra. Then flex and extend the body with the other hand upon the shoulder. It is advisable to brace the arm, which is used to make the fixed point, against the operator's body. The vertebra above will be felt to move against the thumb of the hand making the fixed point. Limitations of motion here may be perceived also by having the patient alternately flex and extend the body. A variation in the pulling of the muscles on either side will denote a lesion of that side. At the junction of the fifth lumbar vertebra with the sacrum, there is a rotary motion, and as Homer E. Bailey, D. O., mentioned at our last meeting, often instead of a simple innominate lesion the whole pelvis will be rotated upon the fifth lumbar vertebra.

In this paper little has been said about the technique of correction which is bringing forth so much discussion in the osteopathic field. We have dealt so far only with the anatomy of the articulations and the methods of testing for their individual movements. Later, I hope we will have the pleasure of hearing a paper which H. F. Goetz, D. O., is now preparing. It is to show his results in attempting to simplify our technique of adjustment to the bare mechanical principles as determined by the anatomy of the articulation involved.

In summing up this paper, when we find the lesion, we must consider:

First.—What is the anatomy of this particular articulation? Its function?

Second.—What types of motion are peculiar to the articulation?

Third.—The treatment of an articular lesion is dependent upon structure, anatomical relation and function.

Fourth.—Of great importance, in what position shall we place the patient in order to obtain the greatest amount of relaxation and freedom to the normal motions of the articulation to be corrected.

Fifth.—The foregoing points having been determined, carefully select your levers of bones, muscles or ligaments, then apply your corrective force, with the lesion well in mind: Utilize always, when possible, the pathway of least resistance referred to above.

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Editorials

FROM THE BOARD OF TRUSTEES

To the Osteopathic Profession:

To devise the means for bringing the osteopathic concept before the American people effectively and yet without offense is a problem which has concerned your Trustees for two years past. There is no definite and final solution yet to this perplexing question. Under these circumstances, we wish to advise with the entire profession on the important subject of Publicity for Osteopathy, and we invite a free discussion and presentation of views. Much has been said on the subject, but unless suggestions and recommendations are carefully written out and concisely presented to your Trustees, it is difficult for the Board to consider them as they may deserve.

Within the past year, a few definite propositions have been presented to the Board of Trustees which appear more or less feasible. Among the number is one that lecturers be sent into the field, and arrangements be made for their appearance, especially at state meetings where held in the larger cities; further, that the profession in the cities be urged to arrange for lectures to be given by those who might be encouraged by the A. O. A. to engage in this work. The Board, at its recent session, adopted a resolution approving heartily of this undertaking, and the Publicity Bureau is preparing to make this possible.

Another proposition is that the Association publish a set of "stock" magazines of sixteen or twenty pages and put these at the disposal of the profession at as low cost as possible. The idea in this is to have an undated magazine, but one issued with the authority of the American Osteopathic Association back of it, and devoted to a scientific presentation of the osteopathic philosophy and practice to the intelligent lay reader. Each of the several issues of the magazine would be devoted to a different phase of the subject and represent the best literature obtainable, printed in an attractive form. The end had in mind in preparing these pamphlets will be not their salability, but the production of something which will give to the intelligent patient a true conception of the simplicity of the theory of osteopathy and the general applicability of it to disease conditions. Propositions to advertise osteopathy in the literary magazines, and to found on a subscription

basis a health culture magazine from the osteopathic standpoint were made, but they seemed not feasible when considered by the Board.

It has been suggested more recently that a small monthly or quarterly subscription magazine might be issued, given over in part to articles such as our osteopathic popular magazines have printed, but in addition considerable space be devoted to the important problems with which the profession is concerned. It is suggested that such a magazine might keep before its readers the size and development of the osteopathic school of practice, its colleges, their courses of study; the hospitals and clinics and sanitoria conducted by the profession; its organizations, state, national and local; and largely its distinctive research work, and the Research Institute which it has founded; that it might also show the need of regulating osteopathy in the several states, that the character of legislation asked for by the profession is in no sense class legislation, but enactments giving the same rights to this school of practice as are enjoyed by the other schools. It is maintained that there is much along this line that those already interested in osteopathy and even the casual reader should know. The sponsors for this proposition suggest that such a magazine should have a small subscription price and be entered in the mails and be on sale through the news stands.

It is pointed out that much of this matter could not be printed by a publisher printing literature "to sell," because while this matter is educative along broad lines, it is not distinctively "patient-getting," and the physician most interested in securing patients, rather than in educating those he has, will not appreciate this matter. Those who have suggested this proposition maintain that there would be a large field for such a magazine at a nominal subscription price and that the combination of this with the more scientific stock articles, together with the matter now put out by the publishers of osteopathic literature, would splendidly cover the field. This latter proposition is a combination of one made by Dr. Vastine referred to above to found a subscription magazine with that made by one of the publishers of osteopathic literature, that the Association take over his magazine and conduct it.

Stated briefly, the above represents the plans proposed to the Board and considered by it. But before taking any further action the Board wishes to know from the profession just what it needs and how it thinks this need can be best supplied. That there is a crying need for literature differing in scope and character from that now available to the profession, your Trustees believe exists. How to supply what is needed, in justice to all, is the question upon which the Board wishes suggestions.

It may be stated that the Executive Committe at its session held in February, 1912, authorized the publication of a series of pamphlets above referred to and the Committee was instructed to see if our publishers of osteopathic literature or any of them were willing to bring out these magazines. The publishers seemed unwilling to do this, although as intimated above, one publisher offered to turn over his magazine to the A. O. A. under an agreement to run it for a number of years.

Following a failure to get from the publishers a proposition to bring out these stock magazines, even if the matter were furnished them, the Board at the Detroit meeting authorized the Bureau of Publicity to co-operate with the Committee on Publication and the Secretary of

the A. O. A. and procure the matter and issue at intervals the magazines as described above at as reasonable a price as possible. The Board is pleased to report that a number of articles have been submitted and the Bureau hopes to have at least one of the pamphlets available within a short time. Progress is also being made in preparing the lectures and before the winter is past, it is believed several lectures will be available for important meetings.

The Board of Trustees has no wish to enter the publication field, if by any means the literature which it believes should be available can be otherwise procured; but our publicity program seems very inadequate and incomplete and the Board believes that it can render the progress of osteopathy no more effective service than by aiding in such a campaign.

To summarize, the Board has authorized the preparation and publication of the semi-scientific "stock" magazines; it has approved of and is encouraging in every way at its command the lecture propaganda; it is arranging to provide short articles which members of the profession may have published in their local papers as reprints from magazines or other papers and not appear as paid advertisements, these will be useful chiefly in the newspapers of the smaller cities and towns. It has not finally disposed of the remaining proposition to found the small subscription magazine.

What does the profession think of this proposition? Is there a demand for it? Can the profession and its clientele maintain it for a few years until it is established on a firm basis? What has the profession to suggest that the Association should do, or could do, further than outlined herein?

Your Board wishes at its approaching meeting to again take up this question and in the meanwhile it will welcome pointed suggestions and brief discussions from those who have given this matter thought.

Respectfully submitted,

Board of Trustees of A. O. A.,
C. B. Atzen, D. O., *Pres.;*
H. L. Chiles, D. O., *Secy.*

EDUCATE OUR CLIENTELE

Under the caption, "Publicity for Osteopathy," there appeared an editorial article of considerable length in the Journal of June, 1912, and the reader is asked to re-read that carefully as an introductory to the consideration of the above communication from the Board of Trustees and this article of more definite and limited scope. The former article, as does this, expresses only the views of the editor of the Journal on this question. It is impractical to submit a full discussion and amplification of the address of the Board of Trustees to the Board for its ratification. In justice to members of the Board, who may or may not agree with what is said on this subject in this article and the one above referred to, this disclaimer for the Board is made at the outset.

Two channels of publicity are open to us. Either to endeavor to reach new people who, so far as we know, care nothing about osteopathy, and lodge with them some limited idea of it and tell where an osteopath may be found; or to more thoroughly educate and instruct those who have come under osteopathic treatment, but who perhaps imagine that the chronic ache or pain for which they were treated is the only condition osteopathy treats, and to endeavor to take advantage of this satisfactory experience on their part with osteopathy to teach them that the prac-

tice is dependable in all curable ills. In other words, to use literature in the attempt to induce people to come to the osteopath or to use it for the purpose of educating those who have come.

It is this last named phase of the work which the program laid out by the Board covers particularly; for it appears to offer excellent results, besides it is a field most neglected by the profession. Then, again, all can unite on a propaganda along this line. There may be differences of opinion as to the propriety or value of sending out matter to strangers unasked for by them, but there can be no possible question of the ethics of placing in the hands of our patients literature prepared especially for those who have found out that osteopathy treats successfully at least one ailment.

Informed members of the Association doubtless realize that comparatively few members of the profession distribute, or even have on their reading room tables, osteopathic literature for the education of their clientele. It is perhaps true that the greater part of the popular literature used by the profession is sent out through the mails to strangers. In this article we shall not discuss the ethics, or value or the possible hurt, to the advancement of osteopathy of the matter so sent. We wish to press the fact that so many thousands of loyal osteopathic physicians are making no use whatever of the printed page to educate their clientele. This condition is altogether wrong, and the loss the practice of osteopathy sustains through the failure of its well established physicians to educate their clientele is tremendous.

The question naturally comes up, why does not the average osteopathic physician have this literature on his reading room table or place it in the hands of his patients? Perhaps it is carelessness or indifference to the need of it, perhaps this has not been pressed upon him as a duty we owe our profession. Perhaps our present literature being dated and each copy an issue of a regular publication and prepared especially to attract the attention of those who know nothing of osteopathy —to introduce the stranger to osteopathy, as it were—rather than to educate one who has already taken treatment, seems to him not suitable for his clientele. The fact is our clientele, as a whole, is not being educated as it should be, and we must assume that one or the other or both of these is operating as a cause to prevent the osteopathic physicians of the country, otherwise interested in osteopathy, from doing this most necessary work.

The JOURNAL believes that both of these conditions, if they exist, will be met. It will enter heartily into the program of the board to urge the use of literature among our clientele, and it believes that within a year the number of those so using educative literature can be multiplied many times. As to the literature used, no standard of requirements can be adopted; each must select for himself from what is available. That many are pleased with what they are now using is evident. These need not be disturbed by the new activities. Those who are not using literature we are interested in reaching, and in order to reach many of them it is evident that a somewhat different literature must be obtainable.

As stated in the letter of the Board of Trustees, an effort was made to have the present publishers bring out literature prepared especially for the use of osteopathic physicians with their patients and not for the especial purpose of securing new patients from among

those not familiar with osteopathy. As this did not meet with a favorable consideration, the Board has arranged to have several such pamphlets prepared and published, because it seems to be true that a great many osteopathic physicians will not use literature prepared along present lines. That our people will use certain matter with their clientele seems to be evidenced by the fact that a great many thousand copies of the address of Russell Duane, Esq., "Osteopathy Fifty Years Hence," have been sold to the profession through notices in the JOURNAL, and this is in no sense educative matter, but it simply sets forth the possibilities of the new school in the field of preventing disease following injuries and the use of such a system especially to public service corporations. Whether the literature can be distributed, whether the profession can be aroused to educate our clinetele remains to be seen; but the Board has confidence in it and the articles are being prepared. It is probable that the publishers of popular osteopathic literature believe that publishing literature aimed at *educating* the clientele, rather than primarily at *enlarging* the clientele will not pay. Perhaps it will not as a private enterprize, but if real educative matter can be produced and if the profession will distribute it, a spendid work will have been done—a work the national association should not leave undone—and it is hoped this can be done without in any way curtailing the business of the present publishers.

We turn our attention, therefore, to educating and developing our friends. This is certainly a most important field. It seems to the JOURNAL that more depends upon making real vital converts to osteopathy, of those who come in contact with it, than in striving to give those who know it not some idea of the school of practice. The five or six thousand osteopathic physicians of the country have unquestionably treated a million of people; perhaps two million would be nearer correct—it may be twice that figure. That is certainly a splendid clientele, if we but had them educated to really know something of the principles upon which osteopathy rests. How many of these think well of osteopathy for aches and pains and certain chronic conditions, but never think of it when they or their family or friends become ill? How many of this splendid clientele really know anything of the greatness of the osteopathic profession and of what it has accomplished? There are perhaps a million people in this country who feel some obligation for what osteopathy has done for them. Perhaps one-quarter of this great number suffered from a condition which required but a few treatments to correct. It is not reasonable to suppose that many of these got any conception of osteopathy as a general system of therapeutics.

Let us suppose a case: A man was cured almost instantly of sciatica, or neuritis from a partially dislocated shoulder. A friend who had a similar trouble advised him to see you. Your first treatment did the work. The former sufferer returns a few days later to tell you he is well and express his gratitude for your skill. A few months or years afterwards, this man is asked to aid in passing an act to regulate osteopathy in his state. Or maybe osteopathy is regulated in his state and you want to be coroner or school physician or health officer. This man knows you are skillful in relieving pain, but he does not know enough of the system to say it should be recognized by the state as a school of medicine, nor that you as

a representative of it are qualified, more than a bone-setter, to be a state or county physician. We are weak not because we have not come in contact with enough people, nor because they are not friendly to us personally for what we did for them; but we are weak because this vast army does not know more of what we can do, and what we have done to make of ourselves a profession of the highest use to the race.

The next question is why do they not know more? They cannot know without a teacher. Why has not the osteopath who came in contact with them taught them? These questions are easily answered. In the first place, not all capable physicians are capable instructors and even if they were, it would require much time and more tact than many possess to impart this information without becoming tiresome. Some patients like to talk and be talked to. Many more do not and the osteopathic physician always runs the risk of talking over-much, and being considered a bore or worse. It would be unsafe to urge talking more to patients about osteopathy except to answer questions as concisely as possible to give the facts needed. Some few osteopathic physicians have the personality and the tact which has made them successful in imparting facts regarding osteopathy to their clientele, but these are the rare exceptions and most of us feel justified in imparting such knowledge only when it is asked for.

Very different, however, is the printed page. It would not be a bad plan, if universally adopted, to have no other reading matter on the waiting room table or in the treatment rooms except proper osteopathic literature, so that while the patient waits, if he reads, he must read facts regarding the system upon which he is depending for his health. If this rule be followed, almost every patient will become interested and a reader of osteopathic literature. Then he may be informed that such literature is his for the asking. Under these circumstances, we can certainly give the patient that which will instruct him more and be far more dignified and in keeping with professional ethics than literature which is prepared to attract the eye and arrest the attention of an uninterested person.

And the return from this? Would it not amply repay us if we could make of every person who comes in contact with the practice of osteopathy a genuine believer in the principles of osteopathy, in its broad and general applicability, in fact in it as a system of medicine? As indicated above, too often people because they are not instructed as to what osteopathy really is, believe in it for only conditions similar to that for which they receive treatment, and where they are not instructed as to the principles underlying the system, those who do not secure favorable results know nothing of it except for that class of conditions and their experience being unfavorable, they naturally look upon the system as a failure. By proper education we should not only show every patient who is successfully treated that the osteopathic physician is qualified to treat or direct the treatment of every curable condition and even those who did not secure favorable results, can be made believers in it for other conditions. We shall not need to reach out after new patients ourselves, for if we thoroughly educate our clientele, they will reach their friends for us. It is a lack of knowledge of the system which makes them inactive in our behalf. Is not this activity on their part worth striving to secure?

We not only need to educate them so that they will accept osteopathy as a means of escape from all their ills and

for their influence in spreading this knowledge of it which they can do for us so much better than we can do directly for ourselves, but we can never secure their true co-operation in legislation, in helping us to be granted by the state and municipality the rights accorded physicians of the older schools, until they are educated to look upon osteopathy as a fully equipped system. Is it not worth our while to educate them in order to have their co-operation in these concerns? Is not this the only way in which we can meet the more than one hundred thousand physicians who are banding together against us, backed by the prestige which their numbers and tradition give them and the power of their intrenchment in every state and municipal institution? Are not the indications on every hand that we shall need this help within the next two or three years? Are not the activities of the political doctors a warning to us that unless we make friends of those whom our system has aided to health, that our successors, if not we ourselves, shall be cut off?

An educated and enlightened clientele spells success for firmly establishing osteopathy as a school of medical practice and an escape from the snares which our enemies are setting for us. Will we begin the New Year by using every ethical and proper means to educate more fully those who have sought our service?

THE BRITISH OSTEOPATHIC SOCIETY

It will be of interest to the profession generally in the States to know that there is a flourishing organization of the profession in the British Isles. The secretary has recently had filed with his office the Constitution and By-laws of the organization, together with an application that the British Society be made an affiliating organization with the A. O. A.

This organization is certainly a most gratifying move. Practically all of the eligible physicians in the British Isles are members and although many of them must travel hundreds of miles to attend a meeting, the meetings are uniformly well attended.

Let us hope that our representatives in the British Isles will not lose interest in their organized effort, as so many of our state organizations apparently have done. Too many of the states which a few years ago had splendid zeal and interest now find it difficult to maintain an organization. Too many of us fail to realize the large obligation which rests upon us to maintain the standing of osteopathy *as a profession;* too many of us do not realize that a great part of our individual income comes from the fact that we have brought about a well organized profession and that the practice is not on an individual basis. The few days which attention to organized effort would require of us and the few dollars in fees for maintaining these organizations are time and money wisely spent, even if we wish to put it on the most selfish plane.

Success to our conferees in the British Isles! These and the other osteopathic physicians in Europe should be remembered when we have patients going to Europe.

DOES THE A. M. A. KNOW?

Certain magazines of the country, the *A. M. A. Journal* among them, have done some good work in exposing certain patent medicine concerns which were at least fraudulently advertised. A leading firm of dealers in securities has recently put out a letter advising the purchase of the securities of the Neuralgyline Company. After reciting the immense earnings of this company, it mentions the

principal articles which it controls, such as Cascarets, Danderine, Diapepsin, and Syrup of Figs. It states, "These commodities are to a large extent manufactured for the company by Park Davis and Co. of Detroit, entailing almost no manufacturing responsibility and attending depreciation." It further states that no traveling salesmen are employed, but the company depends upon newspaper publicity to create new business.

Now, the *A. M. A. Journal* has apparently been sincere in exposing many of these frauds. It will not allow a remedy to be advertised and does not countenance its use by the members of the A. M. A. until that article has been investigated by its proper committee and declared not only therapeutically all right, but ethically handled. We venture to say that not one of these remedies which the Neuralgyline Co. advertises is recognized as an ethical proposition. From its standpoint, the advertising of an article to the user without advising that it should be had only through the physician's prescription is unjustifiable; and no doubt this is good professional ethics. Now Park Davis Co. is aiding this unethical business by manufacturing the products that are sold in direct competition with the physician's services. The question actually comes up, is Park Davis Co. ethical? Will the physician stand for using its vaccines when the Park Davis Co. is directly making it possible for an advertised product to compete with him?

Park Davis Co. claims to be ultra-ethical; it has to be; but on the side it manufactures these tabooed proprietary articles which it knows are sold in a manner condemned by its patrons. The trades unions would call this unfair. The A. M. A. has taken cognizance of more trivial offences than this. What will it do when Park Davis Co. is the offender? Consistency is still a jewel!

THE PATRICK CASE

The pardoning by the Governor of New York of Albert T. Patrick, who, almost thirteen years ago. was convicted of being responsible for the death of the millionarie, W. M. Rice, whose estate Patrick was to administer, has revived the medical expert testimony upon which Patrick was convicted. It will be recalled that the late Dr. William Smith was perhaps one of the first to show that the evidence upon which Patrick was convicted was false, at least in one particular.

As we recall the facts, it was maintained before the jury that autopsy had revealed that death had come about from the effect of some drug as formaldehyde or chloroform upon the lungs. It was maintained that this made out a case of murder. Following death, the body was embalmed with a preparation containing formaldehyde injected into the veins. It appears not to have occurred to the defense that fluid thus injected could reach the lungs, and account for its being found there as the cause of death, the victim having been forced to inhale it, as charged by the prosecution.

Several years after the first trial, Dr. William Smith became interested in the case and discovering this feature of the evidence, clearly established the fact that the fluid in the veins by passing through the heart. which it might readily do, could easily reach the lungs and be found there as an evidence of strangulation.

The evidence was entirely circumstantial and largely anatomical and medical, hence the case has recently attracted much attention in the press and the name of Dr. Smith, prominently connected with the parent school of osteopathy, is usually mentioned. It is a matter of general regret that Dr. Smith did not survive to see the evidence which he accumulated, bear fruit in at least contributing to the pardoning of the prisoner.

THE VIVISECTION INVESTIGATION LEAGUE

Some months ago we noticed the organization of this league backed by many prominent men and women of New York City. We stated then that the League had a great field if it sincerely investigated what was being done in human vivisection (for this seems to be the field it has marked out), and made the same public, and did not simply back some partisan and give him the means for exploiting theories.

Apparently the League is making good. Its recent bulletins contain valuable information and gives us a glimpse of what it being done under the cover of state and municipal institutions. Readers of the JOURNAL are familiar with the fact that the charity wards in our public institutions are little more than involuntary hospital clinics. The idea of many of these doctors seems to be that if one is sufficiently unfortunate as to need treatment at the expense of the state, that that gives them the right to experiment upon him without his knowledge or consent. The League finds out that this utterly unjustifiable work is much more general than is commonly believed. A recent bulletin closes with this signicant paragraph, and the JOURNAL believes that as a school of practice, it is our duty to spread a knowledge of what is being done under the cover of treating the sick in charity wards, for this indicates clearly enough what will be done if State Medicine, as is proposed, obtains. All are alike before the law and entitled to the same treatment, whether it be in Sing Sing, in the public school, or in Cook County Hospital.

> Without discussing the doubtful value of these experiments, or the always possible danger therefrom—for the theory of the harmlessness of dead disease germs has by no means a universal acceptance in the medical world, and there remains uncertainty as to what the ultimate effects of such inoculations may be—the question that the Vivisection Investigation League desires principally to raise here, as in its previous pamphlet, is this: Do you consider it morally legitimate to use the patients in our institutions for any experimental purposes whatever, apart from the treatment required by their own particular maladies?
>
> Ought there not to be a law which would protect the helpless people in our hospitals and asylums from the zeal of the physiologist?

Address the League for these bulletins, No. 1 Madison Avenue, New York City.

THE PRIZE ESSAY CONTEST

The conditions under which the prize will be given for the best article submitted in the 1912-13 contest were printed in a letter from Dr. Roberta Wimer Ford, in the November number of the JOURNAL, page 171. Articles submitted in this contest should be in the hands of the Committee not later than May 15, 1913.

The prize in cash for the best article is $50.00 and the contribution made to osteopathic literature, as well as the benefit each will receive from study in making the effort, will richly re-pay preparing an article for this contest, even for those who do not win the prize. Make the reference above for conditions and determine at once to enter this contest.

Departments

TECHNIQUE

CARL P. MCCONNELL, D. O.
Chicago

One of the most common ways for a structure to become malformed or distorted is for its base line or foundation to become uneven so that its base is neither level nor squares with the superstructure. This does not imply that the foundation alone suffers distortion, but within all probability the center of gravity of the structure has, as a consequence, so shifted that the entire unit is more or less misshapen.

Another class of cases will be found where the gravity line alone, through violence, posture, or lack of the development of the structure has become displaced from its normal position. This condition will effect the base to a greater or less extent. Then there are the instances where the superstructure in part or as a whole is involved by stress of strain or maladjustment. The effect upon the base may be considerable or slight or even nil. So great are the forces of compensation and adaptation that the superstructure may be considerably wracked and still the organism maintain a fairly normal poise. There are still other cases due to developmental defects, lack of nutrition, lack of exercises, wrong environment, etc., wherein hardly a tissue is structurally normal.

But in all of these instances one of the fundamental requirements is the consideration of the base and gravity lines. This must be the true starting point of any mechanical technique. Without this understanding our work cannot be of the best. Too many cases are treated superstructurally instead of basically; that is, from the standpoint of mechanics. The true workman will always note foundation structures first. In our opinion the pelvic adjustment is of primal importance. Not that one will always find trouble here, but the significance of the parts fully warrants that careful attention be given this region.

Probably the story of technique will never be completed, but the time is rapidly approaching when broad general lines will be recognized, and this will go far toward crystallizing and confining observation, study and experiment along definite channels. Our object for the present is to offer crumbs from various sources with the hope that many of the profession's bad habits of practice may be more or less remedied. Habits of practice, like habits of thought, are difficult of remedy. These sidelights and fragmentary offerings should go toward the paving of a better technique. Technique in a finished form calls for a thorough detail knowledge of anatomy, physiology and mechanics; and the hint given in the preceding paragraphs shows this most clearly.

In the November issue we gave two or three commonly favorite methods of innominate adjustment. Most practitioners, we are convinced, have several methods of correction, but still there are many whose conception is not clear, and there are a few, sad to relate, who have no method whatever. Of course it is infinitely better to be conversant with one method than with none; although it is very noticeable with a number, who throw the adjustment principle "to the winds," that their positiveness is almost equal to an absession. The Sylphs, contrary to their usual habit, certainly played havoc with the adjustment idea. Still, unquestionably, they must be getting some results, at least inadvertently and fortuitously.

Before mentioning some other methods of innominate adjustment, we wish to note a point that will lessen the number of apparent anterior displacements. In our practice we frequently observe that when the innominate is apparently anterior that careful palpation will discover a rotation of the fifth lumbar in the direction of the supposed affected innominate; that is, the rotation is between the fifth and sacrum—sacrum away from the apparently disturbed innominate and the rest of the spine toward it. Sometimes the rotation is a little higher, and not infrequently, in other instances, there is a secondary or compensatory lesion, a vertebra or two, higher in the opposite direction. When these vertebral lesions are eliminated quite often the pelvis will be found normal. Of course there are cases when the vertebral lesions are secondary to the innominate lesions. However, if the above is carefully noted, many futile efforts will be avoided.

To adjust the lower lumbar is usually one of the easiest things in technique. It is simply a matter of exact localization of the leverages. We will barely mention one method now, to follow out the point, and will discuss other methods later. Invariably place the patient upon the side with the apparent anterior innominate uppermost; flex body and limbs well forward—on fifth lumbar with both upper shoulder and upper hip tipping forward; then stand in front of patient, with one hand firmly fix the sacrum, while with the other grasp underneath the axilla and rotate the enire spine and body, of course including the fifth lumbar, on the sacrum. If the lesion is a little higher, simply shift and localize the lower hand accordingly. The patient must be thoroughly relaxed and a rather sudden exertion made at the critical moment, but if done

properly the method is painless. If not successful at first, shifting of patient and leverages will accomplish results. One usually errs by not flexing the patient sufficiently; sometimes letting the upper leg drop clean of the table will aid. Then, also, one can reverse the activity of his hands if he chooses by making a fixed point of the fifth lumbar, for example, and suddenly pulling downward on the innominate as a lever.

There are several other methods of adjusting twists of the lower lumbar, of course, but they will be considered in a later number. We wish to emphasize again the absolute necessity of careful osteopathic diagnosis. Herein is really the key to a successful technique. Every one of us, we are certain, has great difficulty in improving his technique. The line of least resistance or least effort is toward that deadly routinism. To break up the routine habit so far as technique goes is no small accomplishment. It would almost seem that there is a general treatment Nemesis; not but that there is considerable to the general treatment, but we must control it and not let it curb or repress more effective efforts.

Asa Willard, D. O., gives us a method of innominate adjustment somewhat different from the others:

Anterior Ilium: If it cannot be adjusted with patient on side facing me as I grasp the rim of ilium with one hand and the tuberosity with the other and rotate the innominate backward on the sacrum, I have patient sit with legs extended on the table while I with my hand hold his knee down and with the other around him push his body forward. This, by the aid of the hamstrings, pulls the tuberosity forward and the ilium back. An assistant to push body forward and hold knee down while you work back and down on ilium gives you greater opportunity to guide the force used. Posterior illium: Patient on side, disturbed joint up; arm nearest his head against his shoulder; other hand and upper part of forearm against the posterior ilium, push shoulder back and ilium forward and down. A splendid manipulation when properly executed.

D. L. Clark, D. O., gives the following for anterior ilium:

For right anterior ilium, stand patient facing side of table. Then have him stand on left limb with abdomen on table, you grasp right knee with right hand and place left hand on the sacrum, elevate limb and rotate gently. This is usually done very easily. In stubborn cases an assistant should hold the right limb while you place the right hand on sacrum and with the left arm under chest raise the patient.

H. E. Bailey, D. O., says:

I find more rotated pelves on fifth lumbar than individual displaced innominates. These rotations I correct before I do the innominates and frequently do not bother same until next treatement. In adjusting an anterior innominate, place the patient on the face, pillow over the sacrum, my knee on middle of patient's sacrum, while I stand on stool and pull upward steady and hard on anterior portion of innominate. The tissues in these conditions are often very tender in the thigh, and to use the leg increases the resistance and thus lessens the probability of correction; and besides it saves the patient suffering and fear.

G. W. Burns, D. O., writes:

I doubt if there are many anterior ilia. We find many so-called anterior ilia, but I doubt if they are correctly diagnosed. [There is no doubt in our opinion, as we stated in a few paragraphs back, that a number at least are only apparent. The doctor gives us the following method for reduction of posterior right innominate.—Editor.] Place patient on left side. Operator stands on left side of table, and places left foot on stool, and brings patient's right thigh across operator's left knee. Operator's left hand grasps patient's right leg at ankle, with finger of right hand posterior to the crest of the right ilium or the posterior superior spine of the right ilium; with complete relaxation, press downward on patient's right ankle. This will open the sacro-iliac joint, unlock the lesion, and the innominate can be brought into place.

Della B. Caldwell, D. O., gives the following for posterior innominate:

Relax well around articulation. Patient on back, sacrum resting on edge of table. Assistant holding other side down on table. (The side on which the lesion is extending beyond the table.) Drop leg by side of table, grasp foot, and draw back firmly as far as patient can stand. Bring leg to normal position, and repeat if necessary. This has been very successful in my practice. [This method is certainly very easy on the practitioner. Care must be taken, of course, not to strain the lower abdomen.—Editor.]

Here is a method, for anterior ilium, used by Dr. Ella D. Still, which is quite different from that used by most osteopaths. It should be easy on the operator:

Anterior ilium when patient is not too fleshy is quickly and easily reduced by placing patient face down on table with limb of affected side flexed under body. Physician standing high enough to get good purchase, makes quick and fairly strong pressure on upper part of sacrum. For posterior ilium: Put patient on face, use limb of affected side as lever, raising it carefully while pressure is brought to bear on upper posterior portion of ilium.

The problem of technique is a many-sided one. Without question one of its most important phases is the study of what may be termed sane, safe and pat technique. A year or two ago, C. F. Bandel, D. O., called our attention to the problem of safety in a most emphatic manner. No doubt there is considerable to criticise relative to some of the harsh treatment in vogue. In seems a difficult matter for some to learn that "strong arm" work is not necessarily osteopathic, or if in accord with osteopathic precepts it is really essential. We too often hear of unnecessarily harsh treatment and even of cases where methods approach brutality. It goes without saying that such buncombe should be absolutely tabooed.

A short time ago, Frank H. Smith, D. O., in an address before the Chicago Osteopathic Association, demonstrated in a most practical way how technique may be executed in a careful, efficient and easy way for the practitioner, by not only diligently studying leverages, but, also, by substituting the weight of the operator for energy otherwise expended. No doubt every practitioner has devised certain methods to save himself as much as possible, but this phase of the work is worthy of much study and practice. Every practitioner will come sooner or later to realize that his own physical health is his best asset.

Probably no one in the profession has given these subjects greater thought than C. C. Teall, D. O., and besides he has had an unrivalled opportunity to observe the practice of osteopaths in various parts of the world. In a very sane paper, "A Plea for Moderation," *Journal of Osteopathy* for April, he sums up as follows:

> Undue force involves: Danger—An indicated force if misdirected or misapplied, may prove harmful; (osteopathy is no more an indiscriminate snapping of joints or yanking of parts than a routine movement cure or massage); Fright—Many patients never take a second treatment; Fear—Many prospective patients fail to come because of stories told.
>
> Osteopathy once promised to be revolutionary, but it may come to the point that osteopathy will have to be revolutionized. Too much extraneous matter is creeping in which, with violent and uncalled for methods, has caused us to swerve from the straight and beaten path of the Founder.

We are in receipt of some advance sheets of an another timely article by the doctor, called "Motion Study in Osteopathic Technique," and we have requested the privilege to let us print two or three paragraphs of the same, for he is such an ardent disciple of simplication and standardization of technique:

> Motion is the basis of all physical endeavor and, to quote Mr. Gilbreth (from a work on Motion Study), "There is no waste of any kind in the world that equals the waste of needless, ill-directed and inefficient motions. When one realizes that in the trade of brick laying alone, the motions now adopted after careful study have already cut down the brick layer's work more than two-thirds, it is possible to realize the amount of energy that is wasted by the workers of the country." These outlines are the result of studies of brick laying, the oldest mechanical trade there is, having passed through all the eras of history, both barbarous and civilized, so it might be supposed to be perfected, yet motion study has revolutionized it to the extent quoted.
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> Another example and far removed from the one given (we are not quoting it) was the handling of pig iron at the Bethlehem Steel Co. works, where efficiency of a man rose from twelve and a half tons per day to the astounding total of forty-seven tons without corresponding fatigue, but with sixty per cent. increase in pay. Our work is manual and made up of many motions, most of them complicated—too complicated by far as a rule. It is the cutting down of those motions that would economize on the expenditure of muscular and nervous energy and minimize the dissipation of these forces.
>
> Again quoting: "The reduction of the number of motions can be accomplished in two radically different ways, (1) By analyzing every step of a process and improving or eliminating them as a result of the analysis or by devising an entirely new way of accomplishing the same object." The second step has to do with mechanical devises in which we have no interest. He warns us, "It is well to recognize fist as last that real progress from the best of present methods to the standard method can never be made by elimination. Elimination is often an admirable make-shift. The only real progress comes through reconstruction of operation, building it up of standard units or elements." Showing that we must be creative and not depend on simply changing the old order of things.
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> * * * The dissimilarity of osteopathic technique is often commented on by patients and not always to our credit, for it would seem that there should be more uniformity in different osteopaths, even though results are equal without it, which they, unfortunately, are not. That is the fault of the man, not the system.
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> Our work is not standardized and probably never can be entirely, although it is in hip and shoulder joint reductions and there is no reason it should not be to a still greater extent. It would make for more specific work, for as no one now attempts to rub one of those joints into place, he would, properly trained, probably not try to rub in any of the numerous vertebral luxations. Anyway, there are certain rules which can be laid down which, if followed, will save the operator fatigue, muscular strain and vertebral luxations resulting therefrom, as well as much time.
>
> * * * With few exceptions there is not a correction which cannot be made by the simplest method and where the back of the operator will not pay the penalty of improper technique. Application of this principle, while intended to shorten and lighten the actual work, does not affect the efficiency, but rather increases it while saving the patient much discomfort at times.

The foregoing is some of the high points the doctor emphasizes, and we believe there is not an osteopath of experience but that will unqualifiedly endorse it. A number of osteopaths have been more or less imparied in health through strenuous labor and it seems to be the common opinion of those who have investigated and given the matter some thought that considerable of the laborious work can be lessened by a change in technique without in the least mitigating therapeutic efficiency.

14 W. Washington St.

PERSONAL HYGIENE

Orren E. Smith, D. O., Indianapolis

The internal secretions of the testes and ovaries have a marked influence upon the personal hygiene of the individual. While it is possible for the individual to live without these internal secretions, it is not possible to deprive the body of them without impairing it in many ways.

If we note the effects of castration upon the body it is evident that the secretions of these glands are intended by nature to promote maturity, and aid in maintainance of functional activity of the body.

In women whose ovaries have been removed, a tendency to obesity, which is an evidence of degeneration, developes; and after the menopause, when the ovarian functions are on the wane, woman loses some of her feminine qualities, hair growing more abundant on her face, and feminine fear and shyness being in abeyance. In disease of the ovaries, women show a pale yellow cachectic complexion, a dull apathetic expression of the eyes, with premature gray hair, and loss of vigor.

In some parts of the Orient, as in India, Roberts has seen female eunuchs, who had no bosom, no pubic hair, but had narrow pelvis and masculine buttocks. These women were castrated in childhood.

In men, castration affects the individual quite as much, if not more, than it does the female. If the male is castrated before puberty the voice never changes to the deep masculine tones that take place in the normal male at puberty, but a high shrill sibilant treble tone is present throughout adult life. In the female the larynx changes in size at the time of puberty in the proportion of 5 to 7; in the male 5 to 10, and owing to the influence of the internal secretions upon the body these physical changes never occur if castration is performed in childhood.

Lorand states that Ponct has shown that the extremities of the castrated rabbits are abnormally long, and it is a known fact that eunuchs have unusually long arms and legs. The eunuch is also likely to become fat, and has an old leathery wrinkled skin. He has no mustache, his skin is yellow and his hands are cold.

Lorand states:

About a hundred years ago, it was shown by Gall, who was attacked by several authors, among them Ruger, as innovations always are, but who was also successfully defended by the celebrated German nerve specialist and philosopher Moebius—that castrated animals or persons have an alteration in the back part of the skull indicating an impoverishment of the cerebellum. And, indeed, he produces his own evidence and that of several other authorities, Darnery, Rousseau, etc., which gives the history of several autopsies on castrated persons, all of whom showed an atrophy of this structure. In cases where only one of the testicles was destroyed, this atrophy was always present in the hemisphere of the small brain on the opposite side.

A very peculiar effect is produced upon the male by excessive horseback riding which affects the generative organs. The Scythians are great horseback riders and as these men ride their horses without saddles the generative organs become impaired in a way that results in impotence, which is a very frequent disease among these people today. These Tartars, who become impotent, take on the ways of the females of the tribe, wear women's clothes and associate with the women. The Apache and Navajo Indians also ride excessively and are also noted for their small genitals, mild libido and virility.

Krafft-Ebing quotes an interesting illustration from Hammond of the evil effects and complete destruction of the testes from horseback riding found among the Pueblo Indians of New Mexico. He says:

These decendants of the Aztecs cultivate so-called "mujerados," of which every Pueblo tribe requires one in the religious ceremonies (actual orgies of the spring), in which pederasty plays an important part. In order to cultivate a "mujerado," a very powerful man is chosen, and he is made to masturbate excessively and ride constantly. Gradually such irritable weakness of the genital organs is engendered, that in riding, great loss of semen is induced.

This condition of irritability passes into paralytic impotence. Then the testicles and penis atrophy, the hair of the beard falls out, the voice loses its depth and compass, and physical strength and energy decrease. Inclinations and dispositions become feminine. The "mujerado" loses his position in society as a man. He takes on feminine manner and customs, and associates with women. * * *

Hammond had an opportunity to examine two "mujerados." One had become such seven years before, and was thirty-five years old at the time. Seven years before he was entirely masculine and potent. He had noticed gradual atrophy of the testicles and penis. At the same time he lost libido and power of erection. He differed in no-wise, in dress or manner, from the women among whom Hammond found him. The genital hair was wanting, the penis was shrunken, the scrotum lax and pendulous, and the testicles were very much atrophied and no longer sensitive to pressure. The "mujerado" had large mammae like a pregnant woman, and asserted that he had nursed several children whose mothers had died. A second "mujerado," aged thirty-six, after he had been ten years in this condition, presented the same peculiarities, though with less development of mammae. Like the first, the voice was high and thin. The body was plump.

Scientists who have studied the eunuchs of the Orient declare that the disposition of these castrates is entirely changed by such mutilation. Sir Hugh Adcock, quoted by Lorand, formerly physician to the late Shah of Persia, says that the eunuch is noted for his cowardice, and that he is lazy, avaricious, vain and cruel.

It would seem that the intellect is also affected by castration, as we have no record of a enunch reaching fame in the arts, sciences or professions. On the contrary, such men as Victor Hugo, Goethe, Ibsen, etc., are all noted for their amorous propensities, as well as their intellectual strength. There seems to be a creative strength produced by the sexual glands that, if not used in the reproduction of the species, may be diverted into other channels and be made to create in art, science, invention, letters, etc.

The importance of the sexual glands ought to appeal to all physicians when their functional relation to the body as a whole is considered and their exterpation seldom advised, as such operations are so many times fol-

lowed by lifelong invalidism of the patient. Our profession is especially fortunate in possessing a technique of treatment that is harmless for the patient and wonderfully efficacious in relieving and curing these diseases and it ought to be the pride of our profession to cure these patients by osteopathic treatment, rather than mutilate them, unsex them, and render them incurable by surgery.

If there is any field in which osteopathic hygiene ought to be recognized and applied, it is in the field of sexual life. This is true not only of surgical work, but also in functional use of these organs. Lorand points out that in animals whose systems have been deprived of the internal secretions of the generative organs by castration, such animals succumb much more readily to acute infectious diseases, and reasoning by analogy we would conclude that those persons who indulge in excessive sexual activity to the extent of lowering the general vitality of the body will be more susceptible to acute infectious diseases than those conserving their sexual strength.

There is not the least possible doubt that sexual indulgence is a great drain on one's general strength and vitality. The whole neural system is involved in orgasm; the vaso-motor mechanism is especially active, hence a general disturbance in blood pressure takes place, and does not subside for hours afterwards; moreover, the whole chemistry of the body is involved through the influence this disturbance in blood pressure causes, in all secreting and excreting gland tissue.

Conservation of the resources of the body for protecting itself against invasions of pathogenic bacteria is of great importance to the individual and should be pointed out to the laity by the profession. It is only by educating the public in the great laws of the human body that personal hygiene can be made practical. Without co-operation on the part of the patient, the physician is greatly limited in his usefulness to the public, and cannot hope to accomplish the results and become as efficient as when assisted.

The study of sexual phenomena and sexual law has been neglected in the past because of the false modesty and a prudishness which is anything but creditable to an educated and refined public. Society has paid an enormous price for its modesty on this subject in the past, and it is gratifying to us as a profession that we are able to add no inconsiderable amount to the solution of their problem.

Traction Bldg.

CORRECTIVE EXERCISE

R. Kendrick Smith, D. O., *Editor*
Boston

In prescribing some of the exercises suggested in this department, osteopathic physicians occasionally get discouraged because their patients declare they cannot execute the movements ordered. This is no cause whatever for discouragement. It should, indeed, be an encouragement, because it is, in part, a confirmation of the diagnosis and of the correctness of the prescription. If a patient cannot do the exercise that fact itself is pretty good proof that he needs it, and needs it badly. More than that, it is evidence that when he gets so that he can do it, he will have succeeded largely in correcting that which is the matter with him. In other words, carefully explain to patients that the *attempt* to do an exercise is just as efficacious as the doing of it. Then they will not lose courage, but will keep persistently at it, educating the nerves and strengthening the muscles until they succeed, when, presto, corrective exercise has helped osteopathic adjustment to cure a patient!

In marked contrast to the famous Abbott treatment of structural scoliosis, is the method announced in the current issue of the *American Journal of Orthopedic Surgery* by Dr. E. H. Bradford, of Boston, who has only recently retired from the professorship of Orthopedics at Harvard Medical School to become the dean of that institution. Dr. Bradford says that in his more recent experience he prefers the patient kneeling prone on a hammock, fixation secured by straps. He describes a method especially for rachitic curves in children where the amount of correcting force which can be applied at one time is limited. Before assuming the prone posture, plaster of Paris moulds are made in two entirely separate parts, one for the top, including shoulders and neck, and the other for the pelvis. When these are completely hardened, the patient is slung prone in the hammock and corrective pressure applied by straps and pulleys and adhesive to the middle section, securing rotation back toward normal by absoluely fixing shoulders and pelvis and pulling on the curve. Dr. Bradford uses cords attached to the straps, and running over pulleys above and below. Windows are freely cut and pads used.

Dr. John P. Lord relies largely for his pressure in plaster correction of scoliosis, upon pieces of used automobile tubes, which he blows up after the jackets are put on.

Henrich Meng, in a recent foreign article, vertifies the findings of Hübscher, that the flexor longus hallucis is the muscle which is most weakened and atrophied in flat-foot. His

conclusion is interesting to readers of this department, as he advocates that treatment should be directed toward strengthening this muscle particularly.

In the *Zentralblatt für Chirurgie*, C. Hüebscher shows that muscle atrophy secondary to joint disease or injury or surgery, may be much diminished and sometimes prevented altogether by voluntary contraction and relaxation of muscles without movement of the part. Even when a limb is fixed in a plaster cast or splint, the muscles can be frequently and regularly exercised in every direction by fixing the attention upon particular muscles and groups of muscles and causing them to functionate up to the point of bringing leverage upon the point of insertion, but no farther. This is valuable for the osteopathic physician to remember in post-surgical cases, as it can be done under plaster where the practitioner himself cannot reach with his fingers during the stage of fixation.

The editor of this department has personally verified the claims set forth by Desfosses in the *Presse Medicale* that an enormous influence can be obtained over the nervous system by exercises in equilibrium. Your editor has for some years been preaching upon the importance of the maintainance of equilibrium as a therapeutic measure, and now this eminent French authority emphasizes the direct and immediate effect of the *attempt to procure* equilibrium. So here we have an interesting example of corrective exercise for a two-fold purpose—not only for adjustment, but for an immediate or functional effect upon the nervous system, particularly in those cases of nervous instability. Equilibrium, therefore, seems intimately related in the physical, nervous and, may we suggest it, in the mental plane. The patient stands on one foot, raising the other foot, and the hands are placed on the hips or even on the head if the instability be not too great. Then, in this position, various movements are executed with the thigh, leg and ankle. The struggle to maintain equilibrium trains, strengthens and educates the motor and sympathetic systems.

19 Arlington Ave.

SANITATION

C. A. Whiting, Sc. D., D. O., Los Angeles

THE MENACE OF THE ADENOID

Several times during the past year I have published my independent theories regarding the adenoid as an etiological factor in various diseases. Recently, in my reading, I have come across distinguished authority to support my conclusions and I venture again to bring the matter to the attention of the profession; for osteopathic physicians, above all others, are competent and open-minded enough to develop *now* this phase of preventive medicine to our lasting credit as exponent of comprehensive, positive diagnosis and rational preventive medicine, and to the incalculable benefit of thousands of children.

During the year of 1911 to 1912, it was my pleasure to have charge of an ear, nose and throat clinic in the Pacific College of Osteopathy. This clinic gave me opportunity to examine a considerable number of patients, to note certain malformations, and to collect data not possible to obtain outside such a clinic.

A report of this work was given the National Convention of the A. O. A., which report I shall partially repeat here with some of my conclusions.

From a series of twenty cases, the data of which happens to be at hand, I find the following to be true: Twelve of the twenty show adenoids demonstrably present in some degree, varying from large amounts to mere remnants. Of the eight showing no trace of adenoids *in situ*, the facies and various stigmata indicate, in two cases at least, probable adenoid growth early in life.

A comparison of the two series: Twelve showing adenoids and eight not showing them, give the following interesting results:

Series 1.—Adenoids Present: Osteopathic lesion of: Posterior occiput (3); atlas (6); axis (5); other cervical lesions in (9) cases: Upper dosal (2); rib (2).

As to abnormal conditions in nose, throat and ears, we find: Deviated septa (8); spurs on septum and soft hypertrophies (9); hypertrophied or otherwise diseased turbinates (8); pharyngitis of some form (11); enlarged or diseased tonsils (8); affected ears ranging from chronic catarrhal conditions, and suppurating middle ear to total deafness (9).

Series 2.—Adenoids Wanting: Osteopathic lesions: Posterior occiput in (4); atlas (3); axis (5; other cervical lesions (5); upper dorsal (2); rib (2). Malformations and diseased conditions noted: Deviated septia (2); spurs and soft hypertrophies (3); diseased turbinates (7); pharynigitis (6); abnormal tonsils (2); affected ears (6).

First, the conclusions deduced were that the adenoids present in the epipharynx of the child was the prime factor in the production of deviated septa, hypertrophied and other ways diseased turbinates and all forms of nasal blocking, also for acute and chronic catarrhal changes in the ear with all their sequallae, for enlarged tonsils and cervical glands; and, secondarily, by reason of the chronic inflammation induced throughout the entire area of

mucous membranes of the head and throat, with the resultant lowered tissue resistance that the adenoid was responsible for the greater proportion of the exanthemata of childhood.

Secondly, that the adenoid, in many, if not all instances, was the result of vaso-motor perversion due to osteopathic lesions in upper dorsal and cervical regions occurring either in utero or during the first few years of life, and not due, as generally stated, to syphilis or lymphoid overgrowth following toxemia of various infectious diseases.

Infectious diseases and exanthemata being rather secondary to the adenoid.

Dr. Reik of Johns Hopkins Medical School in his recent text-book suggests that the adenoid may be responsible for many of these pathological conditions, while St. Clair Thompson, in his book just published, repeatedly ascribes to the adenoid the evil results above mentioned. He also attributes to them the doubtful credit of preparing the field for all so-called children's diseases of the head and throat. In his book, credit is given to various earlier observers for suggesting such etiological responsibility, as long ago as ten or twelve years, but such is the characteristic slowness of the medical profession to accept a new viewpoint that even now all emphasis is still being laid on the tonsil as the primary, not the secondary cause of systemic and local weakening and infection.

Of course no mention of the vasomotor perversion and bony lesions are made by either author. Herein is our vantage.

Examination of the two series given will show that two causative factors are to be considered; namely, the adenoid and the direct interference with the vaso-motors by cervical and rib lesions.

You will see that the bony lesions in both series are similar and in themselves entirely sufficient to produce the conditions of chronic inflammation which are present in the nose and throat.

In two cases in the series not showing adenoids, we found sinusitis and ear envolvement.

In the series with adenoids the conditions of chronic inflammation and actual structural deformity occur in much higher percentage, showing that something more than the osteopathic lesions must be operating to produce them.

The adenoid must then bear the blame. Its responsibility for bony deformity and tissue overgrowth is due to the conditions of negative pressure induced through its action as a ball valve posterior to the choanae of the nose. This same negative pressure serves to maintain a passive congestion throughout all the upper respiratory tract, lowering the tissue resistance and rendering these mucous membranes fertile fields for the implantation of all and every form of infectious diseases.

Granted freedom from adenoids and bony lesions of the upper dorsal and cervical regions, probably seventy-five per cent. of the next generation of children living in anything like normal hygienic surroundings, could safely be promised immunity from the exanthemata and all infectious diseases.

To the osteopathic physician the door of opportunity to establish the etiology of the adenoid and of the infectious diseases, opens widest, for to him alone at present is sufficient skill to determine the diagnosis and apply the remedy. The removal of the adenoid will in itself produce a wonderful change for the better because of the improved oxygenation of the tissues and the lessening of the chronic inflammation of the mucous membranes of these regions, but because of the pressure and probable permanence of the strictly osteopathic lesions not all the irritations can be thus removed and a degree of congestion and lowered tissue resistance must remain, predisposing the child to infection whenever environmental conditions favor. Only by the surgical removal of the adenoids and the correction of the osteopathic lesions can we hope to fully and adequately treat these conditions.

If all osteopathic physicians who do much obstetrical practice or whose practice includes the care of children, will as a routine prophylactic measure, determine the presence of the adenoid and insist upon its thorough removal surgically whenever found, and then follow up with post-operative correction of all upper dorsal and cervical maladjustments, I predict that as these children mature the so-called children's diseases will be almost unknown among them.

Normal tissue resistance will knock the bottom out of the serum, vaccine and antitoxin market and practically close the nursery for acute infectious diseases.

Incidentally, this work will go far toward settling the question of the etiology of the adenoid.

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MENTAL THERAPEUTICS

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Why are Physicians' Instructions Concerning Diet, Exercise, etc., so Frequently Neglected?
(Continued from last month)

From the time of Aristotle until the present man has been trying to discover the laws that regulate the action of the mind. Some progress has been made and we can make use of the

laws that have been discovered. There is something strange about the association of ideas. We have all had the experience of having a thought suddenly and unexpectedly enter our mind and the strange thing about it was that it did not seem to have any connection with what was, at the time being, said or done. What flights of imagination the mind is capable of taking! The body may be in one place and the mind, in thought, thousands of miles away. In many cases we can easily see why we think of a particular thing while at other times we are puzzled and cannot tell why.

One may walk down a city street and see hundreds of objects and they will not arouse any particular line of thought. The perception of one object is followed by the perception of another object and in most cases nothing but the present objects are thought of. But by chance one's eyes look at an overcoat and at once he thinks of the overcoat he wore last winter and of how it was accidently lost and that he must order the tailor to make one for the coming winter. All have had the experience of conversing with a person when suddenly you realized that he was not hearing one word that you said, but was in thought, reviewing an experience of former years.

There are many other things that might be mentioned in this connection, but enough has been mentioned to bring to our attention the apparent lawlessness of the mind. However, there is a universal principle which seems to apply to all the different cases and expressed in general terms is, "Whenever there is in consciousness one element of a previous experience, this one element tends to bring back the entire experience." In this matter of association of ideas the psychologists are practically agreed on the laws which follow. The first one is based on repetition and is known as the law of *habit*, and is "the idea next to enter the mind is the one which has *habitually* been associated with the one present to the mind." And it will be well for the physician to remember that generally the present idea links itself with that part of the former experience which was most pleasing or interesting.

The second law is that of *recency* and is: "If two things have been *recently* connected in the mind, when one is thought of again it suggests the other also." The third law is that of *vividness* or *intensity*: "If the present has been associated with a thousand different objects, that one will be suggested with which it has been most *vividly* associated."

All this has a bearing on the practice of a physician. He should remember that the mind is gradually moulded and that habits of thought are gradually formed and that when they are once established they are controlling factors in the action of the mind. The physician will obtain the best results who carefully considers the past history of the case and gives his orders so that they will conform to the patient's manner of thought, in such a way as to bring the patient's thought and action into harmony with what the physician desires to accomplish. It might be well for the physician to test in his own mind and see if the laws of habit, recency and vividness cover all his experiences in the matter of association of ideas.

Now, a few thoughts in regard to suggestion. We think of man as a reasoing animal and how often we find him congratulating himself on the fact. However, a careful analysis of his actions will disclose the fact that to a considerable extent he is a creature that acts from suggestion. He does not like to admit it, but nevertheless it is true. Sometimes he does things, contrary to his desires, simply because the thought of it has been suggested to him. A person stands near a rapidly moving train and the thought comes of how awful it would be to get under the wheels of the train. Under these circumstances some people find they have an almost irresistible impulse to throw themselves under the wheels of the train. In this case the thought is suggested by the awfulness of the situation. In some instances the physician will need to make use of this thought in impressing upon the patient the seriousness of his condition and therefore the great need of his doing all that is prescribed. However, it will be necessary for the physician to be very cautious and careful in doing it.

Every thought one thinks is accompanied by its corresponding movement or tendency to movement; or stated in other words, a thought suggests an action. The reason every thought does not result in completed action is that one is capable of holding different lines of thought at the same time. One thought is balanced against another so that neither produces the result it would if it had been left to itself. This is why the physician's orders have not been carried out; fear of pain, lack of confidence on the part of the patient in the thing prescribed, or something of a similar nature, has produced the thought that has been powerful enough to prevent from acting the thought or idea presented by the physician. So the psychologists have formulated what is called the law of suggestion, which is: "Every idea of a function tends to call that function into activity, and will do so, unless hindered by a competing idea or physical impediment."

In a direct command one person originates the thought and suggests it to another person. The impelling power of a thought in a direct command is in direct proportion to the amount of attention which it secures. A command is a direct suggestion and must be given with

caution so as not to arouse opposition in the mind of the one to be influenced. While man thinks of himself as an independent being, yet he often obeys commands. Man acts from habit, imitation, reason, interest, suggestion, etc. One is willing to obey so long as he is unconscious of the fact. A command is much more effective and less liable to be resisted if it appeals to one's personal interest. A direct suggestion to action and one that leaves the impression with the patient that he is following his own idea in the matter, is the one that accomplishes most.

A school teacher commands a class of forty mischievous children and they obey him, although he could not convince them by reason or compell them by force. Many patients are but children grown large and the physician should be able to recognize a patient of this type. The ward politician and his followers afford us a good example of the type just mentioned.

There are some advantages in the direct command and some of them are as follows: It is generally a short sentence of simple words that are easily understood. It relieves the one commanded of the trouble of making up his mind. It carries with it the idea of authority and usually expresses action explicitly and distinctly. From those who have been accustomed to obey, it meets with a ready response. The value of a command depends upon the way it is expressed and it has its limitations. Directions for exercises to be taken by the patient can be given by direct command and the physician should go through the exercises himself as he is giving them, as nothing attracts the attention so much as movement or action. The business man makes use of this principle when he uses the automatic electric sign.

Summing up in conclusion, we would say the physicians instructions have not been followed because: He has been so interested in manipulation as to neglect other factors of importance; he has treated the patient without due regard to the functions of the mind; he did not reason from the known to the unknown; he failed to discriminate between the person who reasons everything out and the one who is more susceptible to suggestion; he has not given due consideration to the discoveries of experimental psychology as regards attention in its relation to counter attraction, intensity of sensation aroused, contact of ideas, ease with which thought is comprehended, and the need of feeling aroused; then in his association of ideas the present has not been properly linked with the past; habit, recency of thought and vividness of association of ideas have not been duly considered; suggestion as related to action should receive more attention; and, lastly, the advantage of direct command have been slighted.

Current Comment

C. C. Teall, D. O., *Editor*, Fulton, N. Y.

QUACKERY ABROAD

Under this caption the *J. A. M. A.* thunders and trembles with indignation and fear for the dear people. Quackery flourishes in all countries, but Russia does better than any other in holding them down; just the situation we would expect in a despotic land with no freedom of speech or action.

In Germany during the early part of the nineteenth century, laws against quackery were stringent and effective, but curiously enough, at the instance of the medical society of Berlin in 1869, the regulations against irregular practice were much relaxed and the result was a tremendous development of quackery in Germany. Berthenson says that in 1869 the number of quacks in Berlin was twenty-eight. In twenty-four years the number was over a thousand and the whole number practicing in Prussia was over five thousand. In certain districts the number of irregulars outnumbered the qualified practitioners, two to one. In 1906 it was estimated that the number of quacks in Prussia was 10,000 and the scope of their practice had become unlimited. The unqualified practitioners are regularly organized and have schools and institutions providing a four months' course for quacks; there are over 800 societies for study in "nature healing" with a total membership of 112,000. There are over fifty periodicals with millions of circulation. The quacks come largely from the uneducated class, and it is said that over 58 per cent. of the female irregulars have been domestic servants. This condition has led to efforts to amend the laws in such a way as to limit the practice of these people to the minor ills. This has led to strongly organized opposition, similar to the League for Medical Freedom in our country, and, as in the case of our own Congress, the opposition has found support in the Reichstag. This feeling was shown by the chilly reception which the first reading of the proposed legislation received in that body, the same reason being ascribed as here, namely, that the measure would create a "medical trust."

The forces of graft and unrighteousness are peculiar to no country or clime, and they have their champions in the high places and the low. Until the people themselves are better educated concerning the danger and iniquity of quackery, they must be protected from the forces that prey. The popular understanding of these matters is becoming better every day, and, aided by proper laws, the time will come, perhaps, when quackery will be unprofitable.

When the people are educated up to the point of not thinking for themselves, great things will happen; but the trend seems to be in the other direction, judging from the plaint of a letter sent out recently by the Chicago Medical Society in an effort to pull in new members. They say:

Do you realize that the average income of the doctor in America is about $700.00 per year; that economic conditions are not as favorable today as they were twenty, ten or even five years ago; that the earnings of a large proportion of the profession are less than that of organized labor; that the abuse of medical charity as practiced in our hospitals and dispensaries are powerful factors operating to reduce the physician's income; that competition is becoming

rife; that sanitation and preventive medicine is reducing disease materially; that hygiene and not medicine is the slogan of the day; last but not least, the work of the doctor is to be finally eliminated by being absorbed as a function of the state, as evidenced by the fact that the state is continually encroaching upon the work of the profession. * * * It has practically if not legally taken from him nearly all cases of vaccination, etc."

The point here is that it is estimated by authority that 30,000,000 people are taking non-drug treatment and the whole matter sums up that the medical profession has been tried and found wanting; so, instead of becoming educated up to the beauties and joys of protected medicine, it is revolting and going in the other direction very rapidly.

THE RELATION OF PELVIC DISEASE IN WOMEN TO OSTEOARTHRITIS JOINTS

Dr. Dorland read a paper by that title before the Chicago Medical Society and it is published in the *Medical Record* of March 16th. When read in its entirety, one might almost think it written by an osteopath, as it admits all the claims made by us in regard to that region and which were so vigorously denied and ridiculed by the medical profession in the earlier days. How well the editor remembers hearing Dr. W. T. Morris thunder on the floor of the Senate Chamber in Albany, "Why these people actually claim that the pelvic bones can be moved!" That was the most absurd claim he could think of at the moment, but he has lived to see that claim openly taught in his own enlightened school and proclaimed as a remarkable medical discovery. Dorland's opening is here given in full to show the fullness of the investigation given the pelvis and the original (?) thought involved:

Pelvic Articulations as True Joints.—In order to comprehend more thoroughly the relationship existing between pelvic disease in women and pelvic osteoarthritis, the following axioms should be borne in mind: (1) It is now clearly recognized that the pelvic articulations are true joints, comprising in their formation all the structures perculiar to a joint. (2) The articulations between the sacrum and ilia are by far the most important joints of the pelvis. (3) When in a state of health, motion to a limited extent is a definite part of the normal function of the pelvic joints, and this motion exists irrespective of age or sex unless it be restricted or obliterated as a result of some congenital or pathological condition. (4) There is normally a greater mobility of the pelvic joints in women, although motion is present to a limited extent in men. (5) The normal motion of the pelvic articulations consists of an up-and-down play at the symphysis, and in a tilting or forward and back movement of the sacrum upon the ilia—or the ilia upon the sacrum—the center of motion being a transverse axis situated at about the middle of the sacrum. (6) Symphyseal movement, while frequently more apparent, can occur only in conjunction with motion at the sacroiliac synchondroses. (7) The pubic bones, together with their symphysis, are of comparatively little importance in maintaining the stability of the pelvis, and serve chiefly to afford attachment for muscles and support for the pelvic viscera. This portion of the pelvic girdle may be entirely absent without causing serious inconvenience to the patient, even during pregnancy and labor. (8) Obstetrically considered, motion at the sacroiliac synchondroses is of interest as causing an increase or decrease in the size of the pelvic inlet. (9) If the pelvic articulations are true joints they are susceptible to the same diseases as other joints. (10) Not only are these articulations susceptible to disease, but because of their anatomic peculiarities they are more liable to injury than are most of the other joints of the body. This is true, because the bones are simply apposed, with the axis of the joint perpendicular (as at the symphysis) or very slightly oblique (as at the synchondroses), the articular surfaces being smooth or but slightly irregular. Therefore, the stability of the joints depends almost entirely upon the ligaments and muscles.

We ask the reader to carefully consider the ten divisions into which he has classified the pelvic articulations and note if there is anything that has not been taught in osteopathic colleges since their foundation. Perhaps more striking in the way it follows the thought and language of our own writers comes under—

Strain of the Pelvic Joints.—From the brief anatomical description of the pelvic joints already given, it becomes evident that strain of these joints is the simplest pathological condition that may be encountered in them. It is, moreover, the commonest of these conditions, and especially so in the sacroiliac synchondroses. Strain of the pelvic articulations will almost inevitably follow depreciation in the muscular or ligamentous tone of the parts, since, as has been noted, the integrity of the joints depends almost entirely upon the soft tissues surrounding them. It is also self-evident that because of this fact "disturbances in the normal approximation of the bones must be more common and result from much less violence than in other joints" (Goldthwait, Painter, and Osgood). A prolonged maintenance of one position, as stooping, standing, lying, or sitting, will often result in a strain of the sacroiliac joints. It can hardly be doubted that many of the lumbosacral backaches that distress womankind may be explained in this way. Thus, prolonged dorsal decubitus after childbirth, in protracted illness, or after abdominal section, produces a strain of the sacroiliac ligaments with resultant chronic aches and pains. When it is recalled that the sacral plexuses of nerves rest just anterior to these synchondroses, it is easy to understand how readily these nerves may be impinged upon and irritated by the yielding joints. Referred pains are thereby produced—sensations that are referred to the areas of distribution of the irritated nerves instead of to the actual seat of injury.

If the medical readers of this paper will lay the last sentence of the quoted paragraph to heart, they will save many a poor sufferer from so-called water on the knee joint, and other obscure pains of the leg which have their origin in the pelvis or lower lumbar. The reprints which follow show how interested many investigators are in this subject, now that they have found the bones can move.

As interesting in emphasizing the intimate, though imperfectly understood, bond that exists between pelvic disease in women and osteoarthritic joints, the following facts are worthy of note: According to Tyson, the late J. M. DaCosta claimed that rheumatoid arthritis is the form assumed by hereditary gout

in the female. It is well known that females are much more liable to this disease than males—especially sterile women and those suffering from uterine or ovarian disease. Garrod collected 500 cases of arthritis deformans, 411 of which were females and but 89 males. The beginning of the menstrual period is a favorite time for the incipiency of the disease—a striking fact in support of this occult interrelationship between pelvic congestion, physiological or pathological, and osteoarthritis.

We wonder if these were true arthritis or if we, as osteopaths, overlook or do not diagnose this as such and treat as an innominate lesion.

Relaxation of the Pelvic Joints.—The close association which exists between the pelvic articulation and the female pelvic viscera probably cannot be better demonstrated than by the peculiar softening and relaxation of these joints that is so universally noted as occurring physiologically during the latter weeks of gestation, and pathologically in the course of certain grave infections and congestive disorders of the pelvis. Generally, the physiological relaxation of pregnancy is so slight as to escape observation, although it may be definitely measurable. Rarely, the symphyseal relaxation will be so marked that walking becomes difficult or impossible. This relaxation may also be present in the sacroiliac synchondroses, and in both instances the loosening may persist after confinement, resulting in a marked disability in locomotion.

And now he refers to the Master, he who discovered the relation between the displaced pelvic bones and disease and who is honored by having his name attached to the disease:

Goldthwait who, moreover, emphasizes the fact that to a lesser degree, but appreciable, nevertheless, the same condition of *relaxation takes place at each menstrual period*, "which," he says, "from a physiological point of view represents a miniature pregnancy." Of course, this relaxation is slight as compared with that of pregnancy, but it is at times definite enough to cause considerable suffering and real disability. Both the menstrual and the gestational relaxation are clearly due to the increased vascularity of the pelvis in all its anatomic parts at these periods of physiological congestion. The relaxation must naturally be more *pronounced in the presence of menorrhagia* as indicative of excessive pelvic congestion. The symptoms of joint-congestion at these periods are *intermittent, appearing with the flow*, the pain being slight in most instances and located in the abdomen and small of the back, but at other times amounting to a severe sciatica. This pain is *always associated with muscular spasms in the lumbar region, and inability to bend the trunk forward.* In some of these cases, Meisenbach states, motion may be felt in the sacroiliac joints without the aid of leverage of the limbs, merely by placing the thumbs upon the sacrum and the fingers upon the ilia.

If the following could be absorbed by the medical profession and they could make use of it in a practical way, the mutilation of women would have a decided falling off in a short time:

There is, in addition, a decided pathological side to this question of pelvic articular relaxation. It is probable that in any disease of the pelvic organs in which there is present marked circulatory disturbance the joints become relaxed. The converse of this proposition is, undoubtedly, true, as Goldthwait and others have incontrovertibly shown—namely, "that if the pelvic joints become relaxed as the result of accident or disease, the lack of stability of the pelvic girdle, with the resulting weakening of the support of the pelvic organs, leads to congestive disturbances in these organs, this in turn probably reacting upon the joints, so that until the proper treatment can be instituted there exists a vicious circle of cause and effect." Meisenbach, in his recent able paper, suggestively remarks that "the frequency with which the broad ligaments and round ligaments have to be shortened by gynecological interference is the best example of the yielding of ligaments caused by congestion." A similar change, though to a much less degree, undoubtedly takes place in the pelvic articular ligaments, and the relaxation so produced must of necessity result in a strain of the unsupported joints. The greater the pelvic congestion the greater the vascularity of the joints. Therefore, pelvic tumors, uterine myomata and fibromata and ovarian cysts are very prone to be complicated, to a greater or lesser degree, by this articular change. Some of the severer cases of pelvic relaxation originate at the time of the delivery of a child, especially if the labor has been a difficult forceps extraction. In these patients not infrequently an actual displacement of a sacroiliac joint may occur, and these more chronic cases are accompanied by the same symptoms as occur after acute sprains. In the cases developing because of pelvic disease the symptoms are precisely the same as those which follow menstrual congestion, save that they do not occur periodically but are more or less constant. A mechanical cause for the joint-chrondroses. These conditions are to be treated as ordinary strains and relaxation in the manner already laid down.

We have quoted at great length from this paper, not that it conveys any new or startling information to us, as a profession, but as the most perfect specimen of the steal of osteopathic principles that has come to our notice. We are indebted to Dr. E. E. Tucker for the cutting.

BITING THE NAILS TREATED BY CHEWING GUM

Biting the nails is a vicious habit frequently met with in children, and quite often in grown people also. In some persons it amounts to a mania which is difficult to combat. To prevent it by the permanent wearing of gloves is impracticable and requires constant surveillance. Painting the tips of the fingers with bitter solutions, say quinine, aloes, or quassia is often done, but without much success. This treatment requires great perseverance on the part of the parents, but is apt to fail in subjects whose nervous systems are, for hereditary reasons, especially fragile.

It occurred to us to put the teeth to work by chewing some masticatory, as is very prevalent in North America and is beginning to be the case also in Europe, especially in Paris, where these substances are easily procurable in many of the tobacco stores. We have urged the onychophags, whom we have had occasion to treat, to provide themselves with some such chewing material [chewing gum?—Ed.] and to chew a little of this whenever they are taken with the irresistible desire to bite the nails. The results obtained were immediate and perfect, to the great surprise of the parents of our little patients, who could not believe their eyes, after having tried everything to suppress this vile habit in their children.

This treatment offers some slight inconvenience. These onychophags belong to the class of nervous individuals who are candidates for all kinds of manias. Some of them will only change the trick, and become "ruminants" instead of being "rodents." But trick

for trick it is always preferable to have a better trick than a worse one. Onychophagia may provoke an extremely unsightly deformation of the fingers and give rise to sores or to infections. The chewing [of gum] on the contrary acts favorably on the stomach digestion, either by exciting gustatory reflexes (the importance of which has been so well worked out by Pawlow) or by augmenting the salivary secretions which facilitate the digestion of amylaceous matters.—*Paris Medical*.

At last a good word for chewing gum and from a foreign source as well. That habit is one of the many supposed to be exclusively American and one of the stock slurs of the alleged funny man abroad.

VACCINATION ACT

Vaccination Act.—The Vaccination Act of the Province of Ontario, also passed this year, requires infants to be vaccinated within three months, and a fine is imposed for non-compliance in the absence of sufficient reason, such as ill health or insusceptibility. A municipality may by proclamation require vaccination or revaccination of all residents who have not been vaccinated within seven years, and when smallpox is prevalent or is threatened the medical officer of health may exclude from any school or college a pupil who does not produce a certificate of successful, revaccination, or insusceptibility. The provincial government arranges for vaccination through hospitals and dispensaries which receive grants from public funds. Such institutions are required to arrange for the attendance of a public vaccinator on stated days, and to undertake the supply of vaccine lymph to medical practitioners who require it. Domiciliary vaccination in Ontario is thus vaccination by private practitioners with lymph supplied at the public expense. Every municipality, however, is to appoint a public vaccinator to vaccinate at the public cost all poor persons who come to him for the purpose, and all other persons at their own expense. In the matter of vaccination the Ontario legislature has done well to depart widely from the English model. The new Act does not provide special means of exemption to the "conscientious objector," or invite each individual to avoid taking his share in the action which the State desires for the common good.

The Canadian correspondent of the *Lancet* sends the above, and is rather a surprise, as we had supposed our neighbor on the North was more liberal and enlightened.

THE MEDICAL TREATMENT OF CHOLELITHIASIS

Dr. Paul Mayer of Carlsbad has a paper in the *Lancet* on the above subject which is interesting in these days of surgical interference in many troubles which were once considered medical. He says:

According to my own experience the following indications for an operation appear to be established and to coincide with those of most surgeons of the present day:

1. Acute cholecystitis should be treated medically; only the most severe form, cholecystitis acutissima, belongs to the surgeon.

2. Chronic relapsing cholecystitis should be treated by operation only when all the suitably employed agencies of medical therapy have failed.

3. Operation should be performed in chronic obstruction of the ductus choledochus if two to three months of medical treatment are without effect. In cases with prolonged remittent fever, rigors, and bad general condition the operation is unquestionably indicated.

4. Hydrops vesicæ felleæ demands operation only if there are persistent and very severe irritative phenomena.

5. Empyema of the gall-bladder and all suppurating processes in the region of the gall-bladder and in the liver should be operated upon.

6. Adhesions about the gall-bladder should be treated medically so long as the inconvenience produced is not marked. In the most severe cases operation is required.

7. Acute and chronic pancreatitis resulting from cholelithiasis belong to the surgeon.

When it is remembered that all the forms and complications of cholelithiasis for which an operation is indicated are relatively uncommon in proportion to the remarkable frequency of the complaint, it is obvious that for the great majority of patients with gall-stones medical treatment alone comes under consideration.

In general the medical treatment of cholelithiasis rests substantially upon the basis of Naunyn's views. Naunyn, together with his pupils and numerous other observers, has recognized stasis of the bile as the essential for all calculus formation and has shown what an important role inflammation plays in gall-stone diseases. Since Naunyn, nearly all observers have accepted the view that bacterial infection of the stagnating bile is indispensable for the production of concretions. Nevertheless, as a result of the brilliant researches of Aschoff and Bacmeister, convincing proof has been given that simple biliary stasis without bacterial infection can lead to the formation of concretions, and that in many cases a non-inflammatory gall-stone condition precedes the inflammatory gall-stone disease.

He lays particular stress on feeding and thinning the bile, which he describes in part as follows:

We must give patients with gall-stones food as often as possible, a principle which was recommended by Frerichs and emphasized by Naunyn. Unfortunately, this instruction is often misinterpreted, because in the endeavor to stimulate bile secretion especially heavy meals have been recommended. A heavy meal certainly stimulates bile production much more powerfully than any drugs; but as I must again affirm, this is not at all the main object of our treatment. This condition illustrates most distinctly the real danger of marked cholagogue action. Nothing is so likely to induce biliary colic as an over-filling of the stomach, since a stone which has been quiet for months may be made to move by a single heavy meal. *The ordering of frequent but small meals forms the first principle in the dietetic treatment of patients with gall-stones.* The diet should be divided into at least five meals daily.

I have already insisted on the importance of promoting the expulsion of the stagnant, thickened bile, and shown that this can be effected by making the bile more liquid. A thinning of the bile is without doubt produced, and in a less harmful fashion than by cholagogues, by drinking abundance of water, especially on an empty stomach. For this reason practically all physicians agree that abundance of fluids is very useful for patients with gall-tones. In my opinion, the water is best given on an empty stomach, and as hot as possible, for cold liquids should be strongly forbidden in cholelithiasis under all circumstances, as they frequently induce attacks of colic. I therefore recommend all these patients to drink in bed in the morning about an hour before breakfast one to two tumblers

of hot water, in like manner a tumbler in the evening before going to bed, and smaller quantities frequently during the day. It is also very useful for the patients to take warm water at mealtimes. They easily become accustomed to this, and experience the less objection to the warm water the hotter they drink it. A dilution of the bile can also be effected through the rectal injection of water. The introduction of large quantities of water into the intestines has been recommended in cholelithiasis for about thirty years, and many authors have confirmed its useful action. For a long time in Carlsbad enemata of Carlsbad sprudel cooled down from 40 to 50 degree C. have been employed, the patient retaining them as long as possible up to an hour. These injections prove especially useful in chronic jaundice (obstruction of the common duct), and are to be recommended also in such cases when the administration of large quantities of water by the mouth does not appear advisable on account of a coexisting atony or dilatation of the stomach. They are, moreover, of special value where catarrh of the intestine is present at the same time, this condition being, as is well known, a relatively frequent accompaniment of cholelithiasis.

Besides the dilution of the bile, there are yet other factors that promote the expulsion of the bile from the gall-bladder and thus lessen stasis. Here again the function of the choledocho-duodenal sphincter comes into consideration, its periodic opening being the essential preliminary to the entry of bile into the intestine. The more frequently the tone of this muscle relaxes the more often the outflow of bile is rendered possible. According to researches into the nature of this mechanism (chiefly carried out in Pawlow's institute) the sphincter opens during digestion every time the outflow of the food from the stomach into the duodenum occurs.

It would seem that here would be the value of osteopathic work in opening the choledocho-duodenal sphincter and that any abdominal treatment was contra-indicated from the closing paragraph. The paper has many hints which can be used in addition to our regular procedure.

Among bodily movements I lay great stress upon deep breathing exercises, and regard methodical breathing as very valuable. In like manner, also, certain gymnastic exercises carried out in careful fashion are especially to be recommended. All brisk movements, however, such as severe shaking of the body and the lifting of heavy objects, should be avoided. Moreover, I regard massage of the liver and gall-bladder as deleterious.

GALL-STONES

In a brief but interesting paper published in the *Virginia Medical Semi-Monthly*, Dr. Stuart McGuire gives a summary of diagnostic points in gall-stones with the hope of interesting the reader in the subject, for, he says, about one out of every ten persons have gall-tones, and paradoxical as it may seem, it is a deplorable fact that most of the cases are treated for indigestion, while many cases of supposed gall-stones are victims of other disease. The mistakes in diagnosis are because all early symptoms are referred to the stomach and the supposedly pathognomonic symptom of jaundice is most frequently due to cancer. In order, he gives them as follows:

Indigestion is the earliest and most frequent symptom of gall-stones. It is not produced by imprudence in eating, comes on without definite relation to taking food, and is usually relieved by vomiting. Persistent and intractable indigestion that does not yield to treatment is usually due to some organic lesion in the abdomen, such as appendicitis, ulcer or gall-stones.

Pain located in the epigastrium and radiating to the back is another fairly constant symptom. It is dull-aching in character and varies in intensity. It is increased when the gall-bladder is distended and relieved when it is emptied.

Tenderness over the gall-bladder can generally be elicited by spreading the fingers of the left hand over the patient's ribs and hooking the thumb under the costal margin. When the patient takes a deep inspiration, the diaphragm forces the liver down and the sensitive gall-bladder coming in contact with the examiner's finger causes a sudden catch in the patient's breath.

Colic is a familiar symptom. It is due to the sudden blockage of the duct and the muscular contraction of the gall-bladder to overcome the obstruction. Colic is abrupt in its onset and sudden in its relief. The patient is doubled up in agony, he is white and cold, yet sweats. There is faintness, nausea, and vomiting.

Jaundice is not a very frequent symptom of gall-stones. Murphy states it only occurs once in seven cases. It is due to obstruction of the common duct, which may be due to its being plugged by a stone from within, but also may be due to its being compressed by a growth from without. It is a fact which cannot be too strongly impressed that most cases of gall-stones are not attended by jaundice, and most cases of jaundice are not due to gall-tones.

Fever is a frequent symptom of the gall-stone disease, due to an increase in the acuteness of infection. It is marked by its rapid rise and abrupt termination. If the range of temperature be charted, it gives an appearance which Moynihan calls "The Steeple Chart," and Murphy terms "The Temperature Angle of Cholangic Infection."

Tumor or a movable pear-shaped mass which can be palpated in the region of the gall-bladder indicates either obstruction of the cystic duct with a stone and distension of the viscus with mucus, or the obstruction of the common duct by cancer and the distention of the organ with bile.

The Editor would appreciate any cutting of interest that could be used in this department.

Correspondence

OSTEOPATHIC EXAMINING BOARDS

At a meeting of the State Boards held in Detroit during the A. O. A. convention, the following resolution was adopted:

Resolved, That the secretary of this meeting secure lists of all the questions asked by all the Independent Boards during the coming year and forward them to Dr. Chiles and that we request the A. O. A. to publish them in pamphlet form before April 1st, 1913, and that he supply one copy to each member of the independent examining boards in the United States.

Our object is this:

(1.) That we may get our State Boards closer together on requirements of applicants;

(2.) That we may have more uniform examinations and grading of same;

(3.) That we may ultimately pave the way for wider reciprocity between states having independent boards.

Now, doctor, we look for your co-operation in this matter, and any suggestion you may offer will be gladly received. Will you bring this matter before your board and send me copy of questions as requested above?

L. C. Kingsbury, D. O., *Secretary.*

Hartford, Conn.

A POINTED TALK WITH DR. HULETT

I wish to write a few words to the osteopathic profession of the country. There has been much said about our standing, and in regard to our worth as compared with the M. M. D's. There is much to say along this line. There are too many of us out only for the dollar. We do not stick to our teaching on ethics as the M. D.'s do. Osteopathic physicians will go into a city or town and not call on any of the profession there to ask about the established charges or the business side of osteopathy. They rent an office, get into a church, lodge or Y. M. C. A., get a city directory and busy themselves sending out magazines with an advertisement on front page, saying "free examinations and consultations.

That is poor ethics. No M. D. ever does that way. Chiros, magnetic and drugless healers are the only people who do that way. They will give one or two treatments free. Sometimes the osteopath will do the same. I have seen a whole page advertisement in a country paper, a picture of table, office, and the doctor at work on a patient. It looks like some quack's office at the start. These osteopaths treat for $1.00 at office. Sometimes some of their patients go to the city to live and hunt up an osteopath for treatment. Here he is told the charge is $2.00 each or $25.00 for thirteen treatments. Then trouble begins, but you can't make the patient see that the city physicians expenses are two or three times as great as those of the country osteopath; so you lose out. The osteopath in the country town should tell his patients that treatment will cost more in the city or should give them a letter to some osteopath, stating that the patient is unable to pay the higher price.

We have the osteopath who has some medicine and surgical tools on display in his office and who tells his patient to take some castor oil, while he is trying to cure him or her of constipation. Every once in a while some of us non-castor oil, non-electric and non-vibrator people have patients say to us, "I think your business would be better if you would use some of the remedies your brother up town uses."

Understand me on this, there are not many osteopaths at this rot. There are some who treat their patients without ever asking them if they take drugs. I lose at least one person per week by asking this question. I do not treat anyone who takes drugs if I know it. I never take a case that an M. D. has, not that I care for or am afraid of the M. D., but I like to be honest in all things.

We also have recent graduates who come into the field and say, "I am just out of school, you see, and we teach so much more now than we did when Dr. So and So was there." This talk all tends to hurt some one. The young practitioner forgets that the older doctor who has had ten or fifteen years' practice in the field, has gotten wise to many things not taught in school.

Some of our people open an office and have a straight price of $1.50 treatment and free examinations. By the time they are through with all the work they get about 50c per treatment. Of course it is no more than right to treat the poor or needy or people who work hard for a living for less than those who are able to pay, but the one who is able to pay asks for the same price and gets it, too.

Some of our osteopaths say, "O, I am solid with an M. D." I don't think any of us are very solid with M. D.'s. They may treat us right to get some treatment, but never send us any patient except when they want to get rid of them and usually because the patient is out of money. That is the only kind I ever get from M. D.'s. Some others may be more lucky. You can see this all makes strife and keeps us from forming good, strong organizations.

Dr. Pellette, of Liberal, Kansas, is under arrest now, first for manslaughter because a woman whom he attended died in child-birth. He beat the M. D.'s who prosecuted him on that case, then they arrested him on an unlawful charge of cutting the cord, or in other words performing an act of surgery. His new trial comes off December 12, 1912. Still some of us talk about M. D.'s being our friends. Yes, just as long as the M. D. feels he can be the boss. We have spent money on this case and the doctor is a poor man, and has made a fine fight to plant osteopathy on the southwest plains of Kansas. He could have left the place and escaped all this suit if he had been a quitter. If he is beaten, obstetrics is done for in Kansas as far as osteopathy is concerned. I do not know if anyone besides myself wrote to the officers of the National Association, but I was told there is no fund to help in this case. It will be a shame to have this doctor beaten.

There are not many osteopaths in Kansas and only part belong to the Association, and assistance will be welcomed in this case. The profession should be a unit in protecting itself in whatever state the persecution comes.

I will give you a true statement of law in Kansas against chiros as well as against any healer except M. D.'s and D. O.'s. No one can start an office and take pay unless he is registered. No chiro is registered in Kansas. They have a suit on against the Medical Board to compel the board to grant a permit, same as we have, they claim to be graduates of a chiro or osteopathic school at Wichita. The Supreme Court has decided a case against them, but we cannot get our county attorney to have any of them arrested, or at least only a few have been disturbed. The Supreme Court has decided against all such healers in Kansas. This ought to ease up anyone's mind on the subject. The chiros tried for a board in 1911 and will do so again in 1913. I suppose they spend money more freely than the osteopaths who think they are protected and might lose all they have any session.

C. E. HULETT, D. O.

TOPEKA, KAN.

A CASE TO KEEP IN MIND

Having just read the excellent article by Dr. Taylor in the last issue of the JOURNAL, and believing that some of his statements will be considered too radical and a too early abandonment of the situation to the surgeon, by a great part of the profession, I want to cite a case which I saw last week at the Boston City Hospital.

A male, age 35, weight 180, habits good, was suddenly attacked by severe pain in the epigastrium about five o'clock A. M., November 27th. The previous night about eleven o'clock he had taken two ham sandwiches, a glass of milk, and about a quarter pound of Huyler's chocolates. He slept well from that time until he was awakened by the severe pain at 5 o'clock. The pain continued to get worse and at six-thirty he was given a powder by the hotel physician, presumably morphine. The pain continued, though somewhat less severe and more general over the abdomen throughout the day, but he was fairly comfortable due to the morphia. Temperature 99.6, respiration 26, pulse 78, no nausea or vomiting, bowels moved with enema.

That evening he was seen in consultation by one of the best surgeons of the city. At that time the pain had somewhat localized in the right lower quadrant, local spasm of the muscles and tenderness on pressure in region of appendix. The surgeon diagnosticated the condition as acute appendicitis and advised operation. This was at first refused, the man saying that he felt much better than in the morning and did not see that it was necessary. Finally he decided to follow the advice of the surgeon, was taken to the hospital that evening and was operated upon next morning, November 28th. Upon opening the abdomen, the appendix was found to be gangrenous and had ruptured. It was removed, the region drained and the patient is now doing nicely and well on the road to recovery.

During the last two months I have seen at least three cases similar to the one just cited, consequently I do not believe statements such as Dr. Taylor makes should be dismissed without careful consideration. I shudder to think of the result in the above case if he had been my patient, or perhaps the patient of any one of the majority of my readers. I most assuredly would not have advised operation, at least so early in the disease, and especially in that he had had no nausea or vomiting, and also it was his first attack. In all probability twenty-four hours later we would have lost our patient, even with the aid of the best surgical skill. It may be very true that cases like the above are rare, yet better that a dozen are operated upon needlessly and at a time when we will get healing by first intention, than to lose one patient.

J. H. LONG, D. O.

CAMBRIDGE, MASS.

A LESSON FROM BRITAIN

May I call your attention to a matter which has probably already received your notice?

The *Journal A. M. A.* for November 23, 1912, contains a leading editorial under the caption: "Socializing the British Medical Profession." This article is innocent in title only. After a very brief summary of the British situation, it immediately plunges into the real matter at heart. In the first paragraph we find this suggestive conclusion:

> "And yet, if we are not mistaken, this law marks the beginning of the end of the old system of the individual practice of medicine and of the old relationship between patient and physician—*the beginning of a new era*, both for society and for physicians. It provides for nothing less than an assumption, on the part of the government, of the responsibility of providing proper medical care for citizens. * * *"

In conjunction with this we are told that:

> "Physicians in the United States will be interested * * * for the possibility that the adoption of some arrangement of this sort will sooner or later be considered on this side of the Atlantic may be acknowledged."

As a suggestion as to what the average *American* physician is expected by the A. M. A. to do, we have this:

"The lesson which American physicians can learn from the experience of their British brethren is the importance of educating the public on health matters, and of a close understanding and sympathy between the public and physicians."

Then the writer, seeing this "state medicine" an assured fact, closes with this significant statement:

"The physician of the future, *as the official guardian of the public health*, must be assured a compensation which will enable him to do his work," etc.

Every osteopath should read this editorial in its completeness and then try and figure out for himself just where *he* comes in when this ideal paternal care is a reality rather than a figment. For myself, I am actively interested in maintaining the figment in place of struggling futilly against the reality.

J. A. Van Brakle, D. O.
Oregon City, Oregon.

Among the State Societies

Arkansas.—The Association held its annual meeting at Hot Springs, Novembe 15th, with A. W. Berrow. The attendance was large and enthusiastic. The program consisted of a paper, "Typhoid," by J. A. Barnett of Rogers; and an address, "Osteopathic Pathology and Treatment of Tuberculosis," C. A. Dobson, Little Rock. A. W. Berrow presented several interesting clinics.

Officers for the following year were elected: President, C. A. Dodson, Little Rock; Vice-Presidents, C. A. Champlin, Hope, and J. Falkner, Texarkana; Secretary-Treasurer, M. W. Higginbotham, Bentonville (re-elected); Assistant, J. A. Barnett, Rogers; Trustees, A. W. Berrow, Hot Springs; Lillian Mohler, Pine Bluff; A. E. Freeman, Russellville.

Following the meeting, members were the guests of Drs. Berrow and Cummings of Hot Springs at an informal dinner at the Rockafellow Hotel.

M. W. Higginbotham, D. O., *Secy.*

Colorado.—The annual meeting of the Colorado Asociation will be held in Denver, January 21st and 22nd, 1913. Dr. C. B. Atzen, President of the A. O. A., is to be the guest of honor and will give a public address to the laiety on Tuesday evening and on the afternoon of the same day will discuss and demonstrate "Technique before the members of the Association. All members of the profession cordially invited to attend.

J. A. Stewart, D. O., *Secretary.*

Colorado.—The Northern Colorado Association held its third annual meeting in Yongmont, November 9th. An interesting program was given as follows: "Food Poisons," R. R. Daniels, Denver; "Anatomy, Physiology and Histology of the Throat," E. L. Schumacher, Longmont; "Pathology and Treatment of Prevalent Diseases of the Season," W. R. Benson, Longmont; "Treatment of Tonsillitis," Mary N. Keeler, Loveland. Seventeen were seated at the banquet which followed. Officers elected: President, W. R. Benson, Longmont; Vice-President, B. O. Burton, Boulder; Secretary, U. S. G. Bowersox, Longmont. The next meeting will be held in Boulder in April.

U. S. G. Bowersox, D. O., *Secretary.*

The Denver papers on election day showed a large photograph of C. C. Reid, attending Geo. J. Kindall, who visited the poles on crutches following a broken leg which Dr. Reid had atteended to. Mr. Kindall was elected to Congress and the Denver papers say he will be one of the live wires in the next Congress.

Illinois.—The monthly meeting of the Chicago Association was held at Hotel La Salle, November 7. A. D. Becker of Preston, Minn., was present as the guest of honor who presented a clinic for the evening's discussion under the subject, "The Lighter Forms of Scoliosis." The demonstration and discussion following were very helpful and a note of thanks was tendered Dr. Becker.

Rev. Beattie was introduced and gave a lecture of considerable length on the subject, "Commercialized Vice." At the conclusion of the address and discussion, the following resolutions were offered by Dr. Carpenter and unanimously adopted:

Whereas, The Chicago Osteopathic Society having an interest in all matters pertaining to the health and happiness of the citizens of Chicago, desire to express their appreciation of the good work already done by the officials and others in closing up the so-called "South Side Red Light District." It is the sense of this society that a vice district is an unnecessary evil, a disgrace to any city and a breeding spot for disease more dangerous to the community than smallpox;

Therefore, be it resolved, That we are positively opposed to segregation as a means of dealing with this great crime;

Resolved further, That we petition the proper authorities to enforce the laws and ordinances already enacted and bearing upon this subject;

Be it further resolved, that we petition His Honor, the Mayor, and the Common Council to proceed along lines laid down in the recommendations of the Chicago Vice Commission;

Resolved also, That the secretary of this society send a copy of these resolutions to His Honor, the Mayor, of the City of Chicago, to the Special Council Committee which is now investigating this problem and to the Chicago press.

Iowa.—The Seventh District Association held its semi-annual meeting in Des Moines, October 26th. The question of "The Force in Treatment" was discussed by U. M. Hibbets; Symposium, "Lesions as Found, Whether Corrected, or Improved; Methods and Results:" Cervical Region, C. F. Ring; Dorsal Region, C. W. Johnson; Lumbar and Innominates, A. E. Dewey. "Perils of the Osteopath" was the subject of an address by H. M. Ireland.

At the evening session, C. B. Atzen, Omaha, President of the A. O. A., gave an interesting and instructive lecture, "The Human Organism as an Adjustive Mechanism."

Dr. Ring mentioned six points in the diagnosis of true lesion, (a) Appearance as shown by spinous process; (b) Contracted masculature; (c) Tenderness; (d) Impaired function; (e) Limited motion; (f) By putting the ligamentum nuchae on a stretch when pain will be felt at the lesion. The meeting was well attended and much interest manifest.

Bertha M. Gates, D. O., *Secy.*

Kansas.—The Southern Kansas Association held its meeting November 29th and 30th in Wichita and was well attended. Press reports state that the Legislative Committee of the organization was instructed to open a campaign for a law compelling physical examination in the schools by the next state legislature. Dr. L. von H. Gerdine of Kirksville was present as the guest of honor and chief speaker in the discussion of "Diseases of the Heart and Lungs." The afternoon session was given over to discussion of general practice and of the infectious diseases.

Massachusetts.—The November meeting of the Boston Osteopathic Society was held on the 16th.

Mark Shrum, of Lynn, spoke on "Some Interesting Cases," describing the lesion causing incompatibility of temper in a family; removed by the adoption of a baby; sacro-iliac lesion and dermoid cyst causing sciatica; cyst removed; lesion corrected; cured; ulcer of stomach, illustrating difficulty of carrying out treatment; cured; acute anterior poliomelitis with acute 12th dorsal lesion; excellent recovery; acute anterior poliomeylitis in adult; osteopathic care refused; total paralysis remained; high blood pressure, 240 mm., associated with an old syphilis; locomotor ataxia; arrested.

C. E. Achorn spoke on practical points in dealing with patients that he has learned in his fifteen years of practice. Meeting the patients, the examination, over-treatment, overcoming the "treatment habit," treating troublesome children, and methods of some successful medical men, our competitors, in talking with patients, were some of the most instructive points brought out in the talk and the discussion that followed.

Kendall L. Achorn D. O., *Secy.*

The Civil Service Commission of Boston rerecently handed down a ruling which gives all physicians equal opportunity to become supervisors of school physicians in that city. The Health Board recently appointed three physicians as supervisors of school physicians, but the Civil Service Commission claimed jurisdiction over such appointments and notified the Health Board that all Boston Physicians would be eligible to take examination for these positions and announced that examinations will soon be held and appointments can be made only from the eligible list certified to the Health Board by the Civil Service Commission.

Missouri.—The St. Louis Association held its regular meeting November 9th. Papers were read and demonstrations presented by O. S. Miller, Herschel Conner, Elmer Chappell, Genoa Stephens, Mary Crehore, W. F. Englehart and C. M. Case.

New York.—The New York Society held its regular meeting, Murray Hill Hotel, November 16th. L. L. Draper of Camden, N. J., gave demonstrations in technique which were greatly appreciated by the large number in attendance. Following the demonstrations, the report of the Publicity Committee was considered and discussed. The report of the committee involved the selection of one of the popular magazines to be censored by the committee and used by members of the organization for a period of six months or a year. Each member who desired to have the literature sent should send in to a central bureau the names of those to whom he wished it sent, which would compile all names, thus avoiding duplication and hold this as a confidential list, and send out the literature monthly to the same. The proposition included either enclosing the card of the physician sending the matter or printing a geographical list of the members of the society in Greater New York as the members might authorize.

After a full discussion, the proposition was voted down.

Many of the members feel that the Society is not doing its duty in the matter of publicity,

but for some reason this plan as outlined by the committee which had had their careful study for a number of months was not looked upon favorably by the majority of those present at the meeting.

The organization holds monthly meetings the third Saturday night of each month which are instructive and well attended.

The Hudson River North Society recently held its annual meting and elected the following officers: President, M. W. Stearns, Schenectady; Vice-President, Elizabeth E. Frink, Troy; Secretary-Treasurer, Alice A. Brown, Troy.

OHIO.—The Dayton District Society met with W. A. Gravett in Dayton December 5th. E. W. Sackett, Springfield, read an interesting paper on "Anterior Poliomyelitis." An instructive general discussion followed. The attendance was large and it was decided to hold the next meeting the first Thursday in January.

W. A. GRAVETT, D. O., *Secy.*

PENNSYLVANIA.—The November meeting of the Philadelphia County Society was held at Hotel Walton, November 21st. E. M. Downing, York, Pa., demonstrated the Abbott method of curing Fixed Lateral Curvature. B. F. Johnson presented an interesting case for discussion.

W. ARMSTRONG GRAVES, D. O., *Secy.*

The day following the demonstration before the society, the Philadelphia papers gave considerable space to operations preformed by Dr. Downing upon private patients of Earle S. Willard in the latter's office in that city. The newspaper accounts indicate that the operation was successful, patients with bad lateral curvature, walking from the building following the adjustment and application of the cast. Dr. Downing is now receiving many calls to perform this operation, as well as the modified Lorenz operation for congenital hip malformation, on private patients.

CANADA.—The Toronto Association held its regular meting on November 9th at the St. Charles Hotel of that city when Drs. Hugh L. Russell of Buffalo, N. Y., and E. D. Heist, of Berlin, Ont., were present as the guests of honor. After an elaborate dinner and good stories, E. D. Heist read an excellent paper on "Publicity," and Dr. Russell followed with a talk on "Efficiency." Both speakers were interesting and the meeting was highly successful.

FREDERIC SCHILLING, D. O., *Secy.*

ENGLAND.—The British Society held its annual meeting, Hotel Russell, London, September 7th, when an interesting program was carried out. The first order of business was the address of the president; "Discussion of Business Relative to Osteopathic Practice," H. R. Foote, Dublin, Ireland; "The Osteopathic Interpretation of the Germ Theory," L. von H. Gerdine, Kirksville, Mo.

After reports of committees, luncheon was had, which was followed by a business session, when the following officers were elected: President, Frank Hudson, Edinburgh; Vice-President, Jay Dunham, Belfast; Secretary-Treasurer, E. H. Barker, Liverpool.

The set program was resumed and Jean Seymour Hough, London, discussed "Symptomatology Osteopathically Considered," followed by a clinic conducted by E. T. Phelps of Birmingham.

It was decided that the next annual meeting should be held in Edinburgh. The membership of the Society has doubled during the past year.

E. H. BARKER, D. O., *Sec.-Treas.*

Notes and Personals

TROUBLES AHEAD FOR DR. M'CORMACK

It will be recalled that last winter, Dr. J. N. McCormack retired at least temporarily, from active work in the A. M. A. to look after the State Board of Health of Kentucky, for which he had succeeded in securing large appropriations. Our information does not cover the fact as to the enlarged salary, but the money to be handled by the secretary was multiplied several times. A resolution was introduced in the legislature at the time ordering a public legislative investigation of his accounts. This failed to pass, but the state inspector has recently examined the accounts of the Kentucky Department of Health, of which Dr. McCormack has been in full charge for a quarter of a century or more, and the papers report that he finds the accounts of the department short about $69,000, represented by money not accounted for or spent illegally according to the report of the inspector.

Considerable sums are charged up for the attendance of Drs. J. N. and A. T. McCormack upon the sessions of the state legislature. It would appear that the state is expected to pay for the efforts of the secretary in increasing his own salary and the amount of money put at his disposal. Also that it must pay his time and expense while he is seeking to prevent an investigation of his department.

The general impression seems to be that Dr. McCormack has the strong political influences of the state back of him and that probably the

real state of his affairs will not be known, or if known that it would be very difficult to bring him to the book, as the average public official guilty of the same misconduct would be brought. It is not known yet whether the present governor is issuing pardons in advance of conviction as at least one former executive of the state has done to Dr. McCormack's great joy.

This seems to be about what must be expected when any other consideration than fitness for the work in hand operates to secure political appointments. For ten or twelve years past, Dr. McCormack has drawn a big salary and had unlimited expense money at his disposal as organizer of the A. M. A. In recent years he has at least received $7,500 and expenses from that organization. At the same time he appears to have been chief health executive of Kentucky and drawing a large salary there. It is doubtful if even a man of Dr. McCormack's egotism can perform all of these duties to the satisfaction of all concerned. The JOURNAL has no wish to see Dr. McCormack persecuted, because we wish no evil to come to our worst enemy, but these facts are recited to show what must happen if state medicine and the politics incident thereto becomes established as generally as Dr. McCormack has striven to bring about.

Dr. McCormack is still on the job, however. At the same time the papers were full of his alleged defalcation or mis-use of funds of the state, he was writing to the osteopathic member of the Board protesting because an osteopathic physician of the state was carrying a card in one of the country newspapers!

RE-ORGANIZING THE MEDICAL PROFESSION

One sees very much now-a-days in the newspapers in regard to an organization to look after the business side of the practitioners of medicine. Dr. Gibson of Brooklyn, N. Y., recently had an article in the *Medical Record* in which he showed that the income of the physicians is constantly decreasing, until now it has come to be one of the unremunerative occupations. It is significant that the papers tell that the largest attendance in years at a meeting of the Brooklyn Medical Society was the occasion of his address on his subject. That drew them out as a professional program had been unable to do.

About the same time, Dr. Charles L. Dana, before the New York Academy of Medicine asserted that the medical profession was committing hara-kiri by its effort to prevent disease. Dr. Dana appealed for "a new deal for the doctor all around." According to the reports, Dr. Dana declared "that the doctor of the near future would occupy a rather different place in society from that filled by the doctor of today. This new style doctor would invade the field of state craft and then the lawyers and politicians would have a large rôle to play in the handling of school children and would exercise more power over marriages than the clergymen. * * * Unfortunately charlatanry thrives. It seems an immortal fungus that clings to every phase of civilization. Then there are the patent medicines and the various obsessive cults. There are 5,000 Christian Scientists, 5,000 osteopaths, besides chiropractics and other fancy breeds of modern healing. These, perhaps, hurt the medical men for a time, but not eventually. Fooling with disease brings disaster in the end and Christian Science is one of the best economic assests the doctor has."

Dr. Dana illustrated by chart the decrease in death rate, the lengthening of human life about ten years, and at the same time the decrease in the number of doctors. He spoke of the increasing number of deaths through accidents and stated that in the near future instead of giving less medicine, more medicine would be given, but it would be given with a better understanding of what it is and what it does.

To the family physician, he paid this tribute: "He was a useful person in his day but he was badly trained, he was often ignorant and he made many mistakes, for one cannot by force of character and personal charm diagnose a case of appendicitis or recognize a tumor. I think the old family doctor, idealized in memory and story book is going, and it is a good riddance."

Dr. Abraham Jacobi, President of the A. M. A., followed Dr. Dana, but he did not agree with his condemnation of the old style family doctor, but lamented his passing as well as the old style American home. He declared that he was confident that saner considerations would yet restore the home to its former importance in our method of living, and that with the return of the home would come a return of the family doctor, "modified in a sense, but still a general practitioner and friend and confident of his patients."

DEFENDS $50,000 FEE

About the same time that Dr. Gibson was bewailing that the physician was not making a subsistence for himself and family, a writer in the *New York Times* defends the $50,000 surgical fee. This had been questioned by a former writer in this paper about the time the big surgical meeting was held in the city. In defending the fee, this surgeon states that there are two points to be considered: First, cases similar to this, that a German surgeon is said to have sacrificed a life in an operation be-

cause the pagse in the book describing the operation which he was following had not been cut and he turned two pages instead of one. (There is a story that the leaves of the book of Genesis became stuck on one occasion and caused the minister to make a rather ridiculous reading of the scriptures); The other point he makes is that there are surgeons in good standing who have a death rate of 20% following certain operations and there are other surgeons who have a death rate of only 2% in the same operation. Therefore, if a business man or person of wealth values his life, let him pay the $50,000 and get the man with the 2% death record and the man that does not have to read his text to perform the operation and run the risk of the leaves being stuck together.

This argument may be true but it does not seem to establish the fact that the operation is worth $50,000 in order to escape the possibility of having a kit of tools or a towel sewed up inside of one or to have a combination of two or three operations in one, due to careless reading of text.

GERMANS CHASE AMERICAN DOCTOR

A few weeks ago an American medical man. Dr. Maccaura was chased out of Prussia by his conferees in that Kingdom. It seems that the man had some scheme and apparatus for curing rheumatism. He first went into the market places and freely advertised and drew large crowds upon whom he seemed to secure remarkable results. A stable boy for one of the high-up German officials was among the number cured. He reported to his master whose daughter had been bed-ridden for several years and the American was bidden to try his hand and apparatus upon her, which he did with entire success. Then the Doctors' Trust of Germany got busy and had the police give him the customary three days' notice to quit Prussia. The Baron, whose daughter he had cured, interceded; whereupon the doctors assailed Maccaura from a new source, viz., that he was violating the act relative to unfair competition, and the persecuted American became discouraged and left Prussia.

The thing that is not explained is why a man in search of rheumatic subjects should have gone to Germany. The Isrealites once inquired of Moses, "Are there no graves in Egypt? Why did you bring us out in the wilderness to die?" Going to Germany from this country to hunt rheumatics recalls this pertinent inquiry.

ABRAMS AND APPENDICITIS

Dr. Abrams, the Spondylotherapy exploiter, has a good press agent. Very frequently the newspapers give him notices. The recent one that has been running the rounds is that "by tapping on certain of the spines, appendicitis can be cured." At the recent first (and possibly last) meeting of the American Association for the Study of Spondylotherapy, the announcement was made that operations will no longer be necessary in the cure of appendicitis. He claims that by pressing on a certain vertebra, the sigmoid loop may be straightened out. The JOURNAL has seen statements regarding the work of the osteopath so often misquoted and made ridiculous, that it does not wish to judge Dr. Abrams' real statements by the newspaper reports, but it would be of interest to know if the sigmoid straightens out under Dr. Abrams' tappings where the kink goes to.

He also claims to be the discoverer of the function of the spleen, which he declares is to regulate the number of the leucocytes. He claims that by certain tappings which compel the spleen to contract that great quantities of leucocytes are forced out and by this means he cures tuberculosis. Those who wish to try this experiment should tap on the second lumbar spine and for the reverse operation, expanding the spleen, tap on the eleventh dorsal. To straighten out the aforementioned sigmoid, the tapping should be applied to the eleventh dorsal. Just why tapping the eleventh contracts the sigmoid and expands the spleen is not given, but then that is a detail that we should not expect to find in the newspaper report. When he has straightened out the sigmoid, he says he can cleanse the intestine by enema as high up as the appendix. To use his words, "The appendix itself is cleansed by stimulating the nerves controlling its section and the patient gets well."

Mr. I. W. Long, his bookseller and business manager at Columbus, Ohio, who flooded the osteopathic profession with the endorsement of spondylotherapy coming from the secretary of the A. O. A., now admits that he was mistaken about publishing that endorsement and he also states that his efforts to interest the osteopathic profession in Spondylotherapy was a flat failure, as he received not one order from his thousands of letters. This probably is as it should be. If the book, or course of study, is worth anything, it should not be necessary for Mr. Long to manufacture endorsements for it.

DIRECTORY DELAYED

Owing to the fact that delinquents and nonmembers were responding in such a satisfactory manner to the excellent work of the Membership Department, the Executive Committee decided to delay the JOURNAL a few weeks and we hope now to mail it to members soon after the first of the year.

This will be a Directory of the 1912-13 membership and will include those only who are in good standing for the current year. The non-membership directory will be printed in a separate pamphlet of uniform size and will be mailed to all members along with their copy of the Membership Directory. It is believed that this will be much more satisfactory to the membership than having the two under one binding as last year.

TESTING THE INDIANA LAW

From the press dispatches, it is learned that Paul B. Wright, an assistant to J. F. Spaunhurst, at Noblesville, Indiana, has been acquitted of the charge of practicing medicine without a license. It is understood that this is one of the test cases brought to have the courts define the meaning of the Indiana Medical Practice Act, which provides that a licensed physician may have undergraduate assistants working under his direction, who are, hence, not eligible to take the state board examinations. It is understood that similar charges have been brought against other assistants of Dr. Spaunhurst at Greenfield, Shelbyville and possibly other places.

ORDER OF GOLDEN SEAL UNFAIR

Dr. Marion Wittemore of Buffalo sends a letter from the Supreme Secretary of this order declining to pay a disability loan to her because the order requires that the applicant for disability must have been attended by a practicing physician of the allopathic, homeopathic or eclectic school of medicine. The applicant in this case, having been attended by an osteopath, the order declines to make the loan. Dr. Whittemore states that on the certificate she has paid $4.00 per month and $50.00 quarterly for six years and it was held out to her that she would receive $588 at the end of this time. She has been recently informed that instead of being worth the above amount, it is worth about $70.00. Insurance of this kind is becoming more and more uncertain or rather certain of being worthless. The idea in insurance is security and it is unfortunate for one to pay in money for security when no basis for it exists.

JOURNAL BINDER FOR CHRISTMAS

An appropriate holiday gift for an A. O. A. member would be a Big Ben Binder for the JOURNAL of one of the nicer grades. We can furnish this binder in half seal grain cow-hide, lettered in gilt, for $2 each, or full leather flexible cover for $3.25 each. This makes an appropriate gift and one any reader of the JOURNAL will appreciate. Orders should be sent at once.

GOOD SCHOOL WORK

Henry Tete, New Orleans, secretary of the Louisiana Association, is doing some very commendable work in the public schools of his city. He gave a lecture last year on "Hygiene and Osteopathy" in connection with the interest of health through the public schools of his city, and this year is continuing the course and extending it to the high school. His idea is that as children inherit their thought from the household in which they live that he will get at them early and direct their attention while it will be of most service to them. This is a work which the JOURNAL heartily commends to all osteopathic physicians. It is not right that we should turn all of this work over to those who believe in vaccine and inoculation as the only escape from, and prevention of, disease.

WHAT IS AN OSTEOPATHIC PHYSICIAN

This question was asked by the well known neurologist, Dr. Charles L. Dana of New York, in a letter to J. A. Van Brakle, D. O., Oregon City, Oregon, who had written Dr. Dana in regard to the latters' recent work on the facial and cranial nerves.

Dr. Dana's question received a sincere and very intelligent answer from Dr. Van Brakle, though it is not known whether he will attempt to make any use of the knowledge imparted or not.

INIQUITY OF VACCINATION

W. L. Grubb of Pittsburg sends in a little booklet under this head, published by Advance Distributing Co., P. O. Box 963, Pittsburg, Pa., price one dime. Readers may be interested in this, in connection with the article by Dr. Deason printed in this issue.

PERSONALS

Effie E. York divides her time between Palo Alto, Calif., 705 Cowper Street, and her San Francisco office, 1479 Geary Street.

R. S. Coryell, of Brookville, Pa., announces that he has recently been appointed medical examiner for the Metropolitan Life Insurance Co. of New York. Those interested in following the attitude of the Insurance Companies toward osteopathic physicians will be interested in this notice.

Died, in Los Angeles, Calif., September 28th, Dr. Bayard T. Higgins, of that city.

Born, to Dr. and Mrs. Eugene F. Pellette, Liberal, Kansas, December 5th, a daughter, Ruth Dorothy.

Arthur T. Seymour, Stockton, Calif., sends the JOURNAL a copy of a letter of protest which the profession of that city sent to the local paper which had given a long account of Dr. Abrams' claim referred to elsewhere in the

JOURNAL, showing that Dr. Abram, as far as treatment is concerned, was entitled to no credit for originality; but the paper declined to take any notice of the letter from the local osteopathic physicians.

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APPLICATIONS FOR MEMBERSHIP

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CALIFORNIA

Richardson, H. S., Bishop.
Miller, Clara Macforland (P), Mill Valley.

COLORADO

Hamilton, Amanda N. (A), 222 Coronado Street, Greeley.
Loring, A. S., B. S., L. L. B. (A), Palisades.

ILLINOIS

McCall, T. Simpson, The Spurling, Elgin.
Westhold, Mina (P), Wells Bldg., Quincy.

INDIANA

Derck, J. E. (A), Bass Blk., Fort Wayne.
Beaven, L. M. (A), Lebannon.

IOWA

Mattern, A. V. (S), c-o D. M. S. C. O., Des Moines.
Clark, Chas. E. (Sc), Onawa.
Urban, H. L. (A), Decorah

KANSAS

Finch, Anson Dann (Sc), 2056 N. Tremont Street, Kansas City.

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Oldham, J. S. (SS), 38 Pike St., Cynthiana.
Coffman, J. Marvin (A), 315 Allen St., Owensboro.

LOUISIANA

Geddis, Paul W. (A), Hutchinson Blk., Shreveport.
Otts, Edgar B. (LA), Commercial Bk. Bldg., Shreveport.
McBeath, Thos. L. (A), 35 Limerock St., Rockland.

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Taplin, Geo. C. (Mc), 359 Boylston St., Boston.

MISSOURI

Sucith, E. C. (A), 501 N. Main St., Carrollton.
McKenzine, A. L. (A), Commerce Blk., Kansas City.
Boyes, M. A. (A), Kirksville.
McRae, Ira W. (A), Elks Bldg., Trenton.

MONTANA

Stoltenberg, Anna L. (A), Cedar St., Townsend.

NEW HAMPSHIRE

Hopkins, Ralph W. (Mc), 139 Broad St., Claremont.

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Baker, R. P. (A), 215 N. Broad St., Lancaster.

OKLAHOMA

Estlack, M. M. (A), 315 W. Blackswell Ave., Blackwell.
Montague, H. C. (A), 211 1-2 N. B'way, Muskogee.

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Vastine, Herbert J. (A), 523 Franklin St., Reading.

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Chesebrough, Edna (A), 71 Westminster St., Providence.

SOUTH DAKOTA

Beslin, F. P. (A), 111 Fourth Ave., S. E., Aberdeen.
Rifenbark, R. D. (A), Citizens Bk. Bldg., Aberdeen.

VIRGINIA

McCoy, L. C. (A), Paul-Gale-Greenwood Bldg., Norfolk.
Richardson, Martyn L. (Ph), Paul-Gale-Greenwood Bldg., Norfolk.

WASHINGTON

Glenn, J. O. (A), Ginterson St., Kent.
Crofton, Henrietta (A), Leary Bldg., Seattle.
Cunningham, Arthur B. (A), Leary Bldg., Seattle.

WISCONSIN

Bailey, J. R. (N), Masonic Temple, Ashland.
Getchell, Chas. E. (A), Reinking Bldg., Baraboo.

CANADA

Illing, Harold E. (A), Kent Bldg., Toronto, Ont.
Clouse, D. H. (A), Waterland Bldg., Chico.

NEBRASKA

Vallier, Thos. H., 119 1-2 W. 3rd St., Grand Island.

NEW JERSEY

Draper, Louis L. (LA), 434 Penn St., Camden.
Kaufer, John C. (At), Main St., New Milford.

TENNESSEE

Dykes, L. M., M. D. (A), 216 1-2 Main St., Johnson City.

WASHINGTON, D. C.

Pollock, Anna (Ph), 2006 Colorado Road.

MINNESOTA

Stoike, E. J. (Sc), Auditorium Bldg., Austin.

CHANGES OF ADDRESS

Bright, S. H., from Paul-Gale-Greenwood Bldg., to Royster Bldg., Norfolk, Va.

Buehler, John B., from 18 W. 34th St. to 381 5th Ave., New York City.

Burlingham, Jas. P.,from Rochester, N. Y., to Seitz Bldg., Syracuse, N. Y.

Bush, Lucius M., from Kirksville, Mo., to 15 Exchange Pl., Jersey City, N. J.

Dykes, A. L., from Interstate Bldg. to 20 4th St., Bristol, Tenn.-Va.

Frouty, H. M., from Mountain Grove, Mo., to Glendora, Calif.

Fraser, Agnes, from 16 Avon St. to 5 Albion St., Lawrence, Mass.

Keyte, Mary E., from Melun to Neosho, Mo.

Kinney, K. F., from Clarion Bldg., to 101 Fox St., Lapeer, Mich.

Laughlin, E. H., from Bentonville, Ark., to Kirksville, Mo.

McMahon, B. S., from Sault Ste. Marie, Ont., to 2131 Derby St., Berkerly, Calif.

Marshall, Eliz. J. B., from Jamestown, N. Y., to 237 East 10th St., Erie, Pa.

Messick, Margaret E., from 4300 Ellis Ave. to 1030 E. 47th St., Chicago, Ill.

Millard, F. P., from 4 to 12 Richmond St., East Toronto, Ont.

Nelson, Franck C., from Plymouth, Mass., to 491 Pleasant St., Malden, Mass.

Mott, Ellen Bird, from Huntington Ave. to 3 Euston St., Boston, Mass.

Snavely, J. W., from Ennis Bldg., to 204 E. Main St., Ottumwa, Ia.

Teabeau, A. C., from Norfolk, Va., to Hendersonville, N. C.

Van Vleck, from Long Branch, N. J. to Lawton, Mich.

Wilson, Wm. C., from 317 to 216 N. Main St., St. Charles, Mo.

Wolcott, E. J., from Oregon, Ill., to Kirksville, Mo.

Wright, Lucy A., from 600 Riverside Drive to 609 W. 137th St., New York City.

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